

A CATALOGUE

OF THE

COCCIDAE OF THE WORLD.

MRS. MARIA E. FERNALD, A. M.

AMHERST, MASS., U. S. A.
PRESS OF CARPENTER & MOREHOUSE,
1903.

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Author's Edition.

This edition differs from Bulletin 88, of the Hatch Experiment Station of the Massachusetts Agricultural College, only in the omission of the name of the Station and number of the Bulletin from the title page, and the names of the Station staff on the second page. It was printed at the same time as the Bulletin edition.

Introduction.

More than twenty-five years ago I took up the work of making a card catalogue of the Tortricidae for the use of my husband, Prof. C. H. Fernald, who had previously begun this task. Later the utility of the catalogue became so evident that it was extended to include all orders of North American insects for use at the Hatch Experiment Station. The Coccidæ proved to be so important from an economic standpoint, that it was decided to include for this family as complete references as possible to all the scientific literature of the world, and the convenience of such a catalogue to others has led to its publication in this form.

No references have been made in the present work, to literature published before 1758, the date of the first volume of the tenth edition of the *Systema Naturæ* of Linnæus, except when such references seemed to give necessary information. It has been difficult and in some cases impossible to obtain or even find copies of a few desirable works, and in some instances it was necessary to have certain papers copied from some of the larger European libraries. Doubtless some important works may have been over-looked. All references found in current newspapers not of a scientific standing have been omitted, as have also the names and references to literature of the fossil Coccidæ. With the exception of Targioni's Catalogue, the names in which have been generally accepted, no references to catalogues are given unless some new combination is made. No references have been made to literature published after Feb. 28, 1903. Only those common names most generally in use in North America have been given.

The lists of food plants are far from complete as it was not practicable to include all the plants upon which these insects feed, but additional ones may be found in the "Food Plants of Scale Insects," by Prof. T. D. A. Cockerell, published in the Proceedings of the U. S. National Museum, Vol. XIX, p. 725 (1897). Many references have been purposely omitted as they contained no additional information, or gave only new food plants or habitats which were added without giving the references.

It gives me much pleasure to acknowledge numerous favors and great assistance received in the preparation of this work, from gentlemen who have kindly sent me copies of their published works, and have also given me valuable advice or information. Especial mention should be made of Dr. L. O. Howard, Entomologist to the Department of Agriculture, Washington, D. C., who, with his assistants, Messrs. Marlatt, Banks and others gave me most valuable help and information during a recent visit to Washington. Especially am I indebted to Prof. T. D. A. Cockerell, who for the past two years has been constantly sending me *separata* and references to foreign literature, besides giving me all possible assistance in regard to classification and synonymy, the result of his extensive studies on the Coccidæ from all parts of the world. To him is due much of whatever value there may be in this catalogue. I feel it not only a duty but a pleasure to say that I never should have prepared this catalogue but for the assistance and constant encouragement of my husband, who has made great efforts to obtain the necessary literature and who has helped me in every possible way.

This catalogue will doubtless be criticised because of the many changes in generic names, but a study of the original works of the older authors has led to the conclusion that these changes are necessary. Entomologists at the present time differ so much in their opinions on classification that it cannot be expected that these changes will meet with universal approval. Professor Cockerell writes me that "the classification of the Coccidæ is not yet in a satisfactory state. While we know such a small number of the existing forms, and of those we know, we are in so many cases ignorant of the larvae, males, etc. it is utterly impossible to reach final or approximately final conclusions in a large number of cases."

In the preparation of a work like this no one can be more conscious of its omissions and imperfections than the author, but the study of the Coccidæ as a whole is still in its infancy, and there will doubtless be great changes made in their classification as further study is made of the group and new species are discovered. It is hoped, however, that notwithstanding its imperfections this work may be of assistance to those engaged in the study of this important family of insects.

M. E. FERNALD.

Amherst, Mass., March, 1903.

Abbreviations of Names of Authors.

Aldr.—Aldrich	Geoff.—Geoffroy
Amy.—Amyot	Gmel.—Gmelin
Ashm.—Ashmead	Gour.—Goureau
Atk.—Atkinson	Guér.—Guerin-Meneville
Baer.—Baerensprung	Harr.—Harris
Bdv.—Boisduval	Hart.—Hartig
Bechst.—Bechstein	Haw.—Haworth
Benn.—Bennett	Hemp.—Hempel
Berl.—Berlese	How.—Howard
Bern.—Bernard	Iher.—von Ihering
Beth.—Bethune	Johns.—Johnson
Blanch.—Blanchard	Kalt.—Kaltenbach
Bosc.—Bosc d'Antic	Kenn.—Kennicott
Buck.—Buckton	Koll.—Kollar
Burm.—Burmeister	Künck.—Künckel
Chav.—Chavannes	Kuw.—Kuwana
Ckll.—Cockerell	Laem.—Laemmerhirt
Comst.—Comstock	Lam.—Lamarck
Coq.—Coquillett	Latr.—Latreille
Curt.—Curtis	LeB.—LeBaron
Dalm.—Dalman	Lederm.—Ledermueller
de Charm.—de Charmoy	Lefroy.—Maxwell-Lefroy
DeG.—DeGeer	Leon.—Leonardi
Del Guer.—Del Guercio	Licht.—Lichtenstein
Dougl.—Douglas	Lidg.—Lidgett
Eckst.—Eckstein	Linn.—Linnæus
Ehrenb.—Ehrenberg	Lint.—Lintner
Ehrh.—Ehrhorn	Lounsb.—Lounsbury
Fab.—Fabricius	Macq.—Macquart
Fern.—Fernald	Marl.—Marlatt
Fonsc.—Fonscolombe	Mask.—Maskell
Först.—Förster	Mod.—Modeer
Fourc.—Fourcroy	Mont.—Montrouzier
F. Phil.—F. Philippi	Morg.—Morgan
Franc.—Franceschini	Murtf.—Murtfeldt
Frauenf.—Frauenfeldt	Newm.—Newman
Frog.—Froggatt	Newst.—Newstead
Full.—Fuller	Niediel.—Niedielski
Galv.—Galvez	Nietn.—Nietner
Genn.—Gennadius	Oliv.—Olivier

Pack.—Packard	Tasch.—Taschenberg
Panz.—Panzer	Tepp.—Tepper
Parr.—Parrott	Thieb.—Thiebaut de Berneaud
Patt.—Patterson	Thier. Menonv.—Thiery de Menon-
Planch.—Planchon	Thom.—Thomas [ville]
Putn.—Putnam	Tins.—Tinsley
Quaint.—Quaintance	Towns.—Townsend
Rath.—Rathvon	Tyr.—Tyrrell
Ratz.—Ratzeburg	Vall.—Vallot
Reaum.—Reaumur	Walk.—Walker
Rübs.—Rübsaamen	Washb.—Washburn
Sanders.—Sanderson	Webst.—Webster
Saund.—Saunders	Westw.—Westwood
Schr.—Schränk	Witl.—Witlaczil
Schrad.—Schrader	Zehnt.—Zehntner
Serv.—Serville	Zett.—Zetterstedt
Sign.—Signoret	Zimm.—Zimmermann
Snell. v. Voll.—Snellen von Vollen-	Zinck.—Zincken
Targ.—Targioni Tozzetti [hoven]	

Abbreviations of Literature.

- Abr. Ins.—Histoire Abrégée des Insectes, etc. Paris. (Geoffroy). 1762.
Actes Soc. Sci. Chili.—Actes de la Société Scientifique de Chili.
Act. Goth.—Actes Götheborgska Vetenskaps och Vitterhets samhällets
Skrifter. 1778.
Ag. Gaz. N. S. W.—Agricultural Gazette of New South Wales.
Am. Ent.—The American Entomologist.
Am. Farm Ency.—American Farm Encyclopedia.
Am. Gard.—The American Garden.
Am. Mon. Micr. Journ.—The American Monthly Microscopical Journal.
Am. Nat.—The American Naturalist.
Anat. Cocc.—Anatomy of the Coccidæ. (Mark).
Annali di Agr.—Annali di Agricoltura.
Ann. del. Minist. Agric.—Annali della Ministero di Agricoltura, Industria
e Commercio.
Ann. Mag. N. H.—Annals and Magazine of Natural History.
Ann. Rep. Com. Fish, Game, etc.—Annual Report of Commissioners of
Fish, Game, etc., New York.
Ann. Rep. Roy. Bot. Soc.—Annual Report of the Royal Botanical Society,
Ceylon.
Ann. Soc. Ent. Fr.—Annales de la Société Entomologique de France.
Ann. Soc. Linn. Lyon.—Annales de la Société Linnéenne de Lyon.
Arc. Ent.—Arcana Entomologica. (Westwood).
Atti dei Georgofili.—Atti della R. Accademia dei Georgofili.
Atti del. Istituto Ven. Sci.—Atti dell' Istituto Veneto di Scienze, etc.
Atti del. R. Accad.—Atti della Reale Accademia delle Scienze, etc.
Atti del. R. Ist. d' Incorrag.—Atti della R. Istituto d' Incoraggiamento, etc.
Atti del Soc. Ital.—Atti della Societe Italiano di Scienze Naturali. Milano.
Beitr. z. Naturg.—Beiträge zur Naturgeschichte Insekten. (Schränk).
1776.
Berl. Ent. Zeit.—Berliner Entomologische Zeitung.
Bibl. Zool.—Bibliotheca Zoologica.
Bien. Rep. Cal. Bd. Hort.—Biennial Report of California State Board of
Horticulture.
Biol. Centr. Amer.—Biologia Centrali-Americana.
Bol. Com. Parasit. Agric.—Boletin de la Comisión de Parasitologia Agri-
cola, Mexico.
Boll. di Notiz. Agr.—Bolletino di Notizie Agrarie.
Boll. Ent. Agr.—Bolletino Entomologia Agraria.
Boll. Mus. Torino.—Bolletino dei Musei di Zoologia, etc. Torino.
Brit. Ent.—The British Entomologist.

- Bull. Ag. Coll. Univ. Tokio.—Bulletin of the Agricultural College, University of Tokio.
- Bull. Bot. Dep. Jam.—Bulletin of the Botanical Department, Jamaica.
- Bull. de Ferussac.—Bulletin Universel des Sciences, etc. de Ferussac.
- Bull. Div. Ent. Dep. Ag.—Bulletin of the Division of Entomology, U. S. Department of Agriculture.
- Bull. Ill. St. Lab. N. H.—Bulletin of the Illinois State Laboratory of Natural History.
- Bull. Kew Gard.—Bulletin of the Kew Gardens.
- Bull. N. Y. St. Mus.—Bulletin of the New York State Museum.
- Bull. Ent. Soc. Fr.—Bulletin de la Société Entomologique de France.
- Bull. Soc. Ent. Ital.—Bulletino della Società Entomologica Italiana.
- Bull. Soc. Linn. Norm.—Bulletin de la Société Linnéenne de Normandie.
- Bull. Soc. Tosc. di Ort. —Bulletino della Società Toscano di Orticultura.
- Bull. T. s. Dep. Ag.—Bull. Technical series, Division of Entomology, U. S. Department of Agriculture.
- Can. Ent.—The Canadian Entomologist.
- Cat. Br. Mus., Hom.—Catalogue of Insects in British Museum, Homoptera. (Walker).
- Check List.—A Check List of the Coccidæ. (Cockerell).
- Cherm. Ital.—Chermotheca Italica.
- Circ. Roy. Bot. Gard. Ceyl.—Circular of the Royal Botanical Gardens, Ceylon.
- Cocc. Amer.—Coccidæ Americanæ.
- Cocc. Ceylon.—Coccidæ of Ceylon. (Green). 1896, 1899.
- Cocc. deg. Agr. Ital.—Cocciniglie degli Agrumi in Italia.
- Cummun. Mus. Buen. Aires.—Communicationes del Museo Nacional de Buenos Aires.
- Contr. a l'étude Gom. laques.—Contribution à l'étude des Gommès laques des Indes et de Madagascar. 1893.
- Contr. Ia. Ag. Coll.—Contributions to the Department of Entomology of the Iowa Agricultural College.
- C. R. Soc. Biol.—Comptes Rendus Société Biologique de Paris.
- D'Alton, Zeit. für Zool.—D'Alton, Zeitschrift für Zoologie und Zootomie.
- DeG., Mem. Ins.—DeGeer, Mémoires pour servir à l'histoire des Insectes.
- Degli Ins. del Olivo.—Degli Insetti sopra dell' Olivo.
- Dep. Ag. N. S. W.—Department of Agriculture of New South Wales.
- Destr. Ins. Vict.—Destructive Insects of Victoria. (French).
- Deutsch. Ent. Zeit.—Deutsche Entomologische Zeitung.
- Dict. d'Hist. Nat.—Dictionnaire d'Histoire Naturelle de Deterville.
- Die Geog. Verbr. Coch.—Die Geographische Verbreitung de Cochenille-zucht. (Wiepen). 1890.
- Die Pflanz.—Die Pflanzenfeinde aus der Klasse des Insekten. (Kaltenbach). 1874.
- Die Schäd. Forst. & Obst. Ins.—Die Schädlichen Forst-und Obstbaum Insekten. (Henschel). 1895.

- Econ. Ent.—Economic Entomology. (Smith).
 Edinb. Ency.—Edinburgh Encyclopædia. 1815.
 Elem. Zool.—Éléments de Zoologie. (Sicard).
 Ency. Brit.—Encyclopædia Britannica.
 Ency. Meth.—Encyclopedie Methodique. (Olivier).
 Ent. Beitr.—Entomologische Beiträge.
 Ent. Hort.—Entomologie Horticole. (Boisduval). 1867.
 Ent. Mag.—The Entomologist's Magazine.
 Ent. Mon. Mag.—The Entomologist's Monthly Magazine.
 Ent. Nach.—Entomologische Nachrichten.
 Ent. News.—Entomological News.
 Entom. Tidskr.—Entomologisk Tidskrift.
 Ent. Paris.—Entomologia Parisiensis. (Fourcroy).
 Ent. Record.—The Entomological Record.
 Ent. Syst.—Entomologia Systematica. (Fabricius).
 Enum. Ins. Austr.—Enumeratio insectorum Austriae.
 Essai Hist. Nat. Oranges.—Essai sur l'Histoire Naturelle des Oranges.
 (Risso).
 Estud. sob. Ins. Cocc.—Estudios sobre algunos Insectos de la familia de los Coccidos. Colvee.
 Evid. Com. Ag. Ont.—Evidence before the Commissioner of House of Commons on Agriculture, etc. Ontario.
 Faun. Boic.—Fauna Boica. (Schränk).
 Faun. Etrusc.—Fauna Etrusca. (Rossi).
 Faun. Frid.—Faunae Fridrichsdalinae novicia, etc. 1767.
 Faun. Reg. Nap., Cocc.—Fauna del Regno di Napoli, Cocciniglie.
 Faun. Suec.—Fauna Suecica. (Linnaeus).
 Feuille des jeunes Nat.—Feuille des jeunes Naturalistes.
 Forstins.—Forstinsekten. (Ratzeburg). 1837.
 Forstins.—Vollständige Naturgeschichte aller schädlichen Forstinsekten. (Bechstein).
 Forst. Zool.—Forstliche Zoologie. (Eckstein). 1897.
 g.—genus.
 Gac. Agr. del Minist. de Fomento.—Gaceta Agricola del Ministerio de Fomento. 1880.
 Gard. Chron.—The Gardener's Chronicle.
 Gen. Crust. et Ins.—Genera Crustaceorum et Insectorum, etc. (Latreille).
 Gen. e Spec. Diaspiti, Asp.—Generi e specie di Diaspiti, Aspidiotus. (Leonardi).
 Gen. Ins.—Genera Insectorum.
 Gen. Zool.—General Zoölogy.
 Gesch. Ins.—Geschichte Insekten. (Sulzer). 1776.
 Hamb. Mag.—Hamburgisches Magazin.
 Handb. Destr. Ins. Vict.—Handbook of Destructive Insects of Victoria. (French).
 Handb. Ent.—Handbuch der Entomologie. (Burmeister). 1835.

- Hist. Abr. Ins.—Histoire Abrégée des Insectes, etc., Paris. (Geoffroy).
 Hist. Nat. Anim.—Histoire Naturelle des Animaux sans Vertèbres. (Lamarck).
 Hist. Nat. Coch.—Histoire Naturelle de la Cochenille. (Melchior). 1729.
 Hist. Nat. Crust. Ins.—Histoire Naturelle des Crustacés et des Insectes. (Latreille).
 Hist. Nat. Ins.—Histoire Naturelle des Insectes. (Blanchard). 1840.
 Hist. Nat. Oranges.—Essai sur l'histoire Naturelle des Oranges.
 Ind. Mus. Notes.—Indian Museum Notes.
 Ins. Aff. the Orange.—Insects Affecting the Orange. (Hubbard). 1885.
 Ins. Inj. to Fruits.—Insects Injurious to Fruits. (Saunders).
 Ins. Inj. to Trees.—Insects Injurious to Trees.
 Ins. Lap.—Insecta Lapponica descripta. 1840.
 Ins. Life.—Insect Life (Washington, D. C.).
 Ins. Life, Lond.—Insect Life (London).
 Ins. Nox. Ag. N. Z.—Insects Noxious to Agriculture in New Zealand.
 Ins. nuis aux Forêts.—Insectes nuisables aux Forêts.
 Intr. Ent.—Introduction to the Study of Entomology. (Comstock).
 Intr. Sec. Mem. Studii Cocc.—Introduzione alla Seconda Memoria per gli Studi sulle Cocciniglie, etc. Feb. 1869.
 Jahrb. Nass. Ver. Nat.—Jahrbücher des Nassauischen Vereins für Naturkunde.
 Jahrb. Hamb. Wiss. Anst.—Jahrbuch der Hamburgischen Wissenschaftlichen Anstalten.
 Jahr. u. d. Forstwiss.—Jahresberichte ueber die Fortschritte der Forstwissenschaft, etc.
 Jn. Bomb. N. H. Soc.—Journal of the Bombay Natural History Society.
 Jn. de Pharm.—The Pharmaceutical Journal.
 Jn. de Phys.—Journal de Physique, de Chimie et d'Histoire Naturelle, Paris.
 Jn. Inst. Jam.—Journal of the Institute of Jamaica.
 Jn. Linn. Soc. Lond.—Journal of the Linnaean Society of London.
 Jn. N. Y. Ent. Soc.—Journal of the New York Entomological Society.
 Jn. Quekett Micr. Club.—Journal of the Quekett Microscopical Club.
 Jn. Roy. Hor. Soc.—Journal of the Royal Horticultural Society.
 Jn. Trin. Nat. Club.—Journal of the Trinidad Field Naturalists' Club.
 K. Vet. Akad. Handl.—Kongliga Svenska Vetenskaps Akademiens Handlingar.
 Kan. Univ. Quar.—Kansas University Quarterly.
 Lab. di Ent. Portici.—Laboratorio di Entomologia Agraria, Portici.
 La gen. autun. de Dias. pentagona.—La generazione autunnale delle Diaspis pentagona.
 Lehrb. der Mittel. Forstins.—Lehrbuch der Mitteleur. Forstinsectenkunde.
 Lint., N. Y. Rep.—Lintner's Report on the Injurious and other Insects of New York.
 Mag. Ency.—Magazin Encyclopedique.

- Man. Inj. Ins.—A Manual of Injurious Insects. (Ormerod).
- Man. Ins.—A Manual for the Study of Insects. (Comstock). 1895.
- Mant. Ins.—Mantissa Insectorum. (Fabricius).
- Mass. Agr. Rep.—Report of the Massachusetts State Board of Agriculture.
- Mass. Crop Rep.—Massachusetts Crop Report.
- Meddel. Soc. Faun. Flo. Fenn.—Meddelanden af Societas pro Fauna et Flora Fennica.
- Mede. Proef. Suik., Java.—Mededeel. van het Proefstation Oost-Java.
- Mediz. Zool.—Medizinischen Zoologie. (Brandt & Ratzeburg).
- Mem. Acad. Dijon.—Mémoires de l'Académie des Science, Dijon.
- Mem. Acad. St. Petersb.—Mémoires de l'Académie des Science, St. Petersburg.
- Mem. Ins.—Mémoires pour servir à l'histoire des Insectes.
- Mem. d' Hist. Nat. Acad.—Mémoires d'Histoire Naturelle Académie de Science.
- Mem. Ins. grana Coch.—Memoria del grana Cochenilla. 1795.
- Mem. Soc. Imp. Agr.—Mémoires Société Imperiale Agricole de France.
- Mem. Soc. Ital.—Memorie della Società Italiana di Scienze naturale.
- Mem. Soc. Linn.—Mémoires de la Société Linnéenne de Paris.
- Metamorph. & Anat.—Metamorphose und Anatomie de Aspidiotus nerii. (Schmidt).
- Mikrosk.—Mikroskopische Gemüths u. Augen Ergötzung.
- Mitth. Schw. Ent. Ges.—Mittheilungen der Schweizerischen Entomologische Gesellschaft.
- Mod. Class. Ins.—The Modern Classification of Insects. (Westwood).
- Monats. Kakteenkunde.—Monatschrift der Kakteenkunde.
- Mon. Brit. Cocc.—A Monograph of the British Coccidæ. (Newstead). 1901.
- Monom.—Monomie. (Amyot). 1848.
- N. Am. Ent.—The North American Entomologist.
- Nat. der Thier.—Naturgeschichte des Thierreiche. (Gistel). 1848.
- Nat. Misc.—Vivarium Naturæ, or the Naturalist Miscellany. 1790—1813.
- Nat. Sci.—Natural Science.
- Naturg. Ins.—Naturgeschichte des Insekten. (Bouche). 1834.
- Notes on Cocc. W. Austr.—Notes on the Coccidæ of West Australia.
- n. s.—new series.
- Nuev. Estud. Cocc.—Nuevos Estudios Coccidos.
- N. Z. Trans.—Transactions of the New Zealand Institute.
- Ohio Nat.—The Ohio Naturalist.
- Penn. Farm Journ.—The Pennsylvania Farm Journal.
- Philos. Trans.—Philosophical Transactions.
- Pract. Ent.—The Practical Entomologist.
- Pr. Ac. N. Sci. Ph.—Proceedings of the Academy of Natural Science, Philadelphia.
- Pr. Am. Assoc. Adv. Sci.—Proceedings of the American Association for the Advancement of Science.
- Pr. Biol. Soc. Wash.—Proceedings of the Biological Society of Washington.

- Pr. Cal. Ac. Sci.—Proceedings of the California Academy of Science.
- Pr. Dav. Ac. Sci.—Proceedings of the Davenport Academy of Natural Science.
- Pr. Ent. Soc. Wash.—Proceedings of the Entomological Society of Washington.
- Pr. Ga. Hor. Soc.—Proceedings of the Georgia Horticultural Society.
- Pr. Ia. Ac. Sci.—Proceedings of the Iowa Academy of Science.
- Pr. Linn. Soc. N. S. W.—Proceedings of the Linnæan Society of New South Wales.
- Pr. Roy. Hor. Soc. Lond.—Proceedings of the Royal Horticultural Society of London.
- Pr. Soc. Amic. Scien.—Proceedings of the "Société Amicale Scientifique de Mauritius."
- Pr. U. S. Nat. Mus.—Proceedings of the U. S. National Museum.
- Pr. Zool. Soc. Lond.—Proceedings of the Zoological Society of London.
- Prospetto di Metod. Cocc.—Prospetto di una nuova descrizione metodica, Coccus. (Costa.)
- Queensland Ag. Journ.—The Queensland Agricultural Journal.
- Rech. Hem.—Recherches anatomiques et physiologiques sur les Hémiptères. (Dufour). 1833.
- Registro trim.—Registro trimestre o collecion de historia, etc.
- Relaz. del. Staz. Ent. Agr.—Relazione della Regia Stazione di Entomologia Agraria. Firenze.
- Rep. Am. Assoc. Nurserymen.—Report of the American Association of Nurserymen.
- Rep. Can. Exp. Farm.—Report of Entomologist of the Canadian Experimental Farm.
- Rep. Dep. Ag. N. S. W.—Report of the Department of Agriculture of New South Wales.
- Rep. Dep. Ent. Corn. Univ.—Report of the Department of Entomology of Cornell University.
- Rep. Ent. Cape Good Hope.—Report of the Entomologist of Cape of Good Hope.
- Rep. Ent. Soc. Ont.—Report of the Entomological Society of Ontario.
- Rep. Inj. Ins.—Report of Observations on Injurious Insects. (Ormerod).
- Rep. Ins. Ill.—Report on the Noxious & Beneficial Insects of Illinois.
- Rep. Ins. Mass. Inj. Veg.—Report on the Insects of Massachusetts, Injurious to Vegetation. (Harris). 1841.
- Rep. Ins. N. Y.—Report on the Insects of New York.
- Rep. Mass. Ag. Coll.—Report of the Massachusetts Agricultural College.
- Rep. Meet. Austr. Assoc. Adv. Sci.—Report of the Meeting of the Australian Association for the Advancement of Science.
- Rep. N. J. St. Bd. Ag.—Report of the New Jersey State Board of Agriculture.
- Rep. Ont. Dep. Ag.—Report of the Ontario Department of Agriculture.
- Rep. Roy. Bot. Gard.—Report of the Royal Botanical Gardens.

- Rep. U. S. Dep. Ag.—Report of the U. S. Department of Agriculture.
 Rep. U. S. Ent. Com.—Report of the U. S. Entomological Commission.
 Rev. Chil. Hist. Nat.—Revista Chilena de Historia natural.
 Rev. Ent. Fr.—Revue Entomologique de France.
 Rev. & Mag. Hist. Nat.—Revue & Magazin d' Histoire Naturelle.
 Rev. Mus. Paul.—Revista do Museu Paulista.
 Rev. Zool.—Revue Zoologique.
 Riv. Pat. Veg.—Rivista di Patologia Vegetale.
 Scale Ins. Less. Antil.—Scale Insects of the Lesser Antilles (Lefroy).
 Scale Ins. Trin.—The Scale Insects of Trinidad.
 Scale Ins. Lac.—Scale Insects that produce Lac. (Froggatt). 1900.
 Schädli. Gart. Ins.—Naturgeschichte der Schädlichen Garten Insecten.
 (Bouché). 1833.
 Scien. Amer.—The Scientific American.
 s. g.—subgenus.
 Sitzb. K. Bohm. Ges. Wiss.—Sitzungsberichte der K. Bohmisch Gesellschaft der Wissenschaften.
 Sitz. Akad. Wiss. Wien.—Sitzungsberichte der Akademie der Wissenschaften, Wien.
 Soc. d'Acclim.—Société Impériale d'Acclimatation.
 Spec. Ins.—Species Insectorum. (Fabricius).
 s. sp.—sub-species.
 St. Nat. Hist.—The Standard Natural History.
 Stett. Ent. Zeit.—Stettiner Entomologische Zeitung.
 Studi bot. sug. Agr.—Studi botanici sugli Agrumi.
 Studii sul. Cocc.—Studii sulle Cocciniglie. (Targioni Tozzetti). 1867.
 Symb. Phys.—Symbolæ Physicæ.
 Synop. Gen. Br. Ins.—Synopsis of the Genera of British Insects.
 (Westwood).
 Syst. Antl.—Systema Antliatorum. (Fabricius).
 Syst. Ent.—Systema Entomologiæ. (Fabricius).
 Syst. Nat.—Systema Naturæ. (Linnæus).
 Syst. Rhyng.—Systema Rhyngotorum. (Fabricius).
 Targ. Catalogue.—Coccidarum Catalogus. (Targioni Tozzetti). Feb. 1869.
 The Entom.—The Entomologist.
 The Ent. Student.—The Entomological Student.
 Tijds. voor Entom.—Tijdschrift voor Entomologie.
 Traité phys. de la Coch.—Traité physique de la Cochenille. (Richter).
 Tr. Am. Ent. Soc.—Transactions of the Entomological Society.
 (Philadelphia).
 Tr. Ent. Soc. Lond.—Transactions of the Entomological Society of London.
 Tr. Ent. Soc. N. S. W.—Transactions of the Entomological Society of New South Wales.
 Tr. Ia. Hor. Soc.—Transactions of the Iowa Horticultural Society.
 Tr. Linn. Soc. Lond.—Transactions of the Linnæan Society of London.

- Tr. Mass. Hor. Soc.—Transactions of the Massachusetts Horticultural Society.
- Tr. Micr. Soc. Lond.—Transactions of the Microscopical Society of London.
- Tr. Penin. Hor. Soc.—Transactions of the Peninsular Horticultural Society.
- Tr. Roy. Soc. S. Austr.—Transactions of the Royal Society of South Australia.
- Treat. Ins.—Treatise on Insects. (Major).
- Treat. Ins. Inj. Fruit & For. Trees.—Treatise on Insects Injurious to Fruit & Forest Trees in California.
- Treat. Ins. Inj. Veg.—Treatise on Insects Injurious to Vegetation. (Harris).
- Verh. d. Nat. Ver. pr. Rh.—Verhandlungen des Naturhistorischen, Vereins der preussischen Rhinelande.
- Verh. z. b. Ges. Wien.—Verhandlung der zoologisch-botanischen Gesellschaft, Wien.
- Vick, Mon. Mag.—Vick's Monthly Magazine.
- West Am. Scien.—West American Scientist.
- Wien. Ent. Zeit.—Wiener Entomologische Zeitung.
- Zeit. f. Wiss. Zool.—Zeitschrift für wissenschaftliche Zoologie.
- Zeit. für Zool.—D'Alton, Zeitschrift für Zoologie & Zootomie.
- Zool. Anzeiger.—Zoologischer Anzeiger.
- Zool. Med.—Zoologie Medicale.
- Zur Morph. Anat. Cocc.—Zur Morphologie und Anatomie der Cocciden. (Witlaczil). 1885.
- ||—Preoccupied.

Family COCCIDÆ

Subfamily MONOPHLEBINÆ.

Genus **MONOPHLEBUS** Burm. Type, *atripennis*.

Monophlebus Burm.. Handb. Ent., ii, p. 80 (1835): Westw., Arc. Ent., i, p. 22 (1841): Sign., Ann. Soc. Ent. Fr., (5), v, p. 363 (1875): Mask., N. Z. Trans., xix, p. 107 (1886): Ckll., The Entom., xxxv, pp. 232, 317 (1902).

1. *Monophlebus atripennis* Burm.

Monophlebus atripennis Burm.. Handb. Ent., ii, p. 80 (1835).

" " Westw., Arc. Ent., i, p. 22 (1841).

" " Sign., Ann. Soc. Ent. Fr., (5), v, p. 364 (1875).

" " Ckll., The Entom., xxxv, p. 318 (1902).

Habitat.—Java.

2. *Monophlebus*(?) *dalbergiæ* "Green," Stebbing.

Monophlebus dalbergiæ "Green," Stebbing, Dep. Notes Ins. Forestry, p. 142, pl. 1, fig. 8 (1902).

Habitat.—India.

On "Sissu" trees.

3. *Monophlebus dubius* (Fab.).

Chironomus dubius Fab., Syst. Antl., p. 46 (1805) [not *Coccus dubius* Fab. Ent. Syst.].

Monophlebus Fabricii Westw., Arc. Ent., i, p. 22 (1841).

" *dubius* Sign., Ann. Soc. Ent. Fr., (4), viii, p. 851 (1868).

" *Fabricii* " " " " (5), v, p. 365 (1875).

" *dubius* Ckll., The Entom., xxxv, p. 318 (1902).

Habitat.—Sumatra.

4. *Monophlebus* (?) *fortis* Ckll.

Monophlebus fortis Ckll., The Entom., xxxiv, p. 224 (1901).

" " " " " xxxv, p. 319 (1902).

Habitat.—Natal.

On Eucalyptus.

5. *Monophlebus*(?) *fulleri* Ckll.

Monophlebus fulleri Ckll., The Entom., xxxiv, p. 223 (1901).

" " " " " xxxv, p. 319 (1902).

Habitat.—Natal.

On grass.

6. *Monophlebus*(?) *illigeri* Westw.

Monophlebus Illigeri Westw., Arc. Ent., i, p. 22, pl. 6, fig. 4 (1841).

" " Sign., Ann. Soc. Ent. Fr., (5), v, p. 365 (1875).

" " Mask., N. Z. Trans., xxv, p. 245 (1892).

" " Ckll., The Entom., xxxv, p. 319 (1902).

Habitat.—Tasmania.

7. *Monophlebus*(?) *raddoni* Westw.

Monophlebus Raddoni Westw., Arc. Ent., i, p. 22, pl. 6, fig. 3 (1841).

" " Sign., Ann. Soc. Ent. Fr., (5), v, p. 366 (1875).

" " Ckll., The Entom., p. 319 (1902).

Habitat.—West Africa.

8. *Monophlebus*(?) *stebbingii* "Green," Stebbing.

Monophlebus stebbingii "Green," Stebbing, Dep. Notes Ins. Forestry, p. 135, pl. 1, fig. 7 (1902).

Habitat.—India.

On "Sal" trees.

9. *Monophlebus*(?) *tectonæ* "Green," Stebbing.

Monophlebus tectonæ "Green," Stebbing, Dep. Notes Ins. Forestry, p. 145 (1902).

Habitat.—India.

On teak trees (*Tectona grandis*).

Genus **TESSAROBELUS** Montr. Type, *guerini*.

Tessarobelus Montr., Ann. Soc. Linn. Lyon., xi, p. 246 (1864): Sign., Ann. Soc. Ent. Fr., (5), vi, p. 600 (1876).

10. *Tessarobelus championi* (Ckll.).

Monophlebus Sp? Ckll., Biol. Centr. Amer., ii, pt. 2, p. 3 (1899).

" *championi* " Ann. Mag. N. H., (7), ix, p. 26 (1902).

Tessarobelus " " The Entom., xxxv, pp. 233, 318 (1902).

Habitat.—Panama.

11. *Tessarobelus guerinii* Montr.

Tessarobelus guerinii Montr., Ann. Soc. Linn. Lyon., xi, p. 246 (1864).

" " Sign., Ann. Soc. Ent. Fr., (5), vi, p. 600 (1876).

" " Ckll., The Entom., xxxv, p. 318 (1902).

Habitat.—New Caledonia.

On *Melaleuca* and *Filices*.

Genus **LLAVEIA** Sign. Type, *axin*.

|| *Ortonia* Sign., Ann. Soc. Ent. Fr., (5), v, p. 363 (1875).

Llaveia Sign., Ann. Soc. Ent. Fr., (5), v, p. 370 (1875): The Entom., xxxv, p. 319 (1902).

s. g. *Protortonia* Towns., Jn. N. Y. Ent. Soc., vi, p. 169 (1898): g. Ckll., Check List, Suppl., p. 390 (1899).

12. Llaveia axin (Llave).

- Coccus axin Llave, Registro trim. Sci. Arts, i, p. 147 (1832).
 " axinus Sallé, Rev. & Mag. Zool., (2), xiii, p. 374 (1861).
 Llaveia " Sign., Ann. Soc. Ent. Fr., (5), v, p. 370 (1875).
 Coccus adipofera Dondé Ruiz, La Emulacion, ii, p. 174 (1879).
 " " " " Scien. Amer., Suppl., p. 2729 (1879).
 " " " " " xlii, p. 10 (1880).
 Llaveia axinus Comst., 2d Rep. Dep. Ent., Corn. Univ., p. 136 (1883).
 " axin Ramirez, La Naturaleza, vi, p. 172 (1884).
 Coccus adipofera Tasch., Bibl. Zool., ii, p. 1526 (1889).
 Llaveia axinus Ckll., Can. Ent., xxix, p. 271 (1897).
 " " " " Pr. Ac. N. Sci. Ph., p. 259 (1899).
 Monophlebus axinus Ckll., Biol. Centr. Amer., ii, pt. 2, p. 2 (1899).
 Llaveia axin Ckll., The Entom., xxxv, pp. 233, 319 (1902).
 Habitat.—Mexico.
 On Spondias myrobolanus; Jatropha curcas; mango.

Llaveia axin dorsalis (Dugès).

- Monophlebus axinus var. dorsalis Dugès, Nat. Mex., (2), i, p. 160 (1888).
 Habitat.—Mexico.

13. Llaveia bouvari (Sign.).

- Ortonia Bouvari Sign., Ann. Soc. Ent. Fr., (5), v, p. 368 (1875).
 Llaveia " Ckll., Pr. Ac. N. Sci. Ph., p. 259 (1899).
 Monophlebus Bouvari Ckll., Biol. Centr. Amer., ii, pt. 2, p. 2 (1899).
 Llaveia " " The Entom., xxxv, p. 319 (1902).
 Habitat.—Guatemala.

14. Llaveia cacti (Linn.).

- Coccus cacti Linn., Syst. Nat., Ed. x, i, p. 457 (1758).
 " " " " " " xii, i, p. 742 (1766).
 " " Fab., Syst. Ent., p. 744 (1775).
 " " DeGeer, Mem. Ins., vi, p. 447 (1776).
 " " Fab., Spec. Ins., ii, p. 395 (1781) in part.
 " " Gmel., Syst. Nat., Ed. xiii, p. 2220 (1789) in part.
 " " Fab., Ent., Syst., iv, p. 227 (1794) in part.
 " " " " Syst. Rhyng., p. 311 (1803) in part.
 Monophlebus cacti Ckll., Science, n. s., xv, p. 718 (1902).
 Llaveia " " The Entom., xxxv, p. 319 (1902).
 Habitat.—St. Eustatius Island, Lesser Antilles.
 On Cactus.

15. Llaveia mexicanorum (Ckll.).

- Ortonia mexicanorum Ckll., Ann. Mag. N. H., (7), i, p. 430 (1898).
 Protortonia " " Check List. Suppl., p. 390 (1899).
 Llaveia " " Pr. Ac. N. Sci. Ph., p. 260 (1899).
 Monophlebus " " Biol. Centr. Amer., ii, pt. 2, p. 2 (1899).
 Llaveia " " The Entom., xxxv, p. 319 (1902).
 Habitat.—Mexico.
 On Acacia greggi?

16. Llaveia primitiva (Towns.).

- Ortonia primitiva Towns., Jn. N. Y. Ent. Soc., vi, p. 169 (1898).
 Protortonia " Ckll., Check List, Suppl., p. 390 (1899).
 Llaveia " " Pr. Ac. N. Sci. Ph., p. 260 (1899).
 Monophlebus primitivus Ckll., Biol. Centr. Amer., ii, pt. 2, p. 2 (1899).
 Llaveia primitiva " The Entom., xxxv, p. 319 (1902).
 Habitat.—Mexico.
 On " Nettle-tree " (Manihot?).

17. Llaveia saundersii (Westw.).

- Monophlebus Saundersii Westw., Arc. Ent., i, p. 22 (1841).
 " " Sign., Ann. Soc. Ent. Fr., (5), v, p. 367 (1875).
 Llaveia " Ckll., The Entom., xxxv, p. 318 (1902).
 Habitat.—East Indies.

18. Llaveia uhleri (Sign.).

- Ortonia Uhleri Sign., Ann. Soc. Ent. Fr., (5), v, p. 369 (1875).
 " " Uhler, St. Nat. Hist., ii, p. 219 (1884).
 Llaveia " Ckll., Pr. Ac. N. Sci. Ph., p. 259 (1899).
 " " " The Entom., xxxv, p. 319 (1902).
 Habitat.—Ecuador.

Genus **DROSICHA** Walk. Type, contrahens.

- Drosicha Walk., Cat. Br. Mus., Hom., iv, Suppl., p. 306 (1858); Sign., Ann. Soc. Ent. Fr., (5), v, p. 353 (1875).

19. Drosicha burmeisteri (Westw.).

- Monophlebus Burmeisteri Westw., Arc. Ent., i, p. 22, pl. 6, fig. 2 (1841).
 " " Sign., Ann. Soc. Ent. Fr., (5), v, p. 364 (1875).
 " " Kuw., Pr. Cal. Ac. Sci., (3), iii, p. 46 (1902).
 Drosicha " Ckll., The Entom., xxxv, pp. 233, 318 (1902).
 Habitat.—Japan; China; Java.
 On pine.

20. Drosicha contrahens Walk.

- Drosicha contrahens Walk., Cat. Br. Mus., Hom., iv, Suppl., p. 306 (1858).
 " " Sign., Ann. Soc. Ent. Fr., (5), v, p. 354 (1875).
 " " Ckll., The Entom., xxxv, pp. 233, 318 (1902).
 Habitat.—Ceylon; N. China.

21. Drosicha corpulenta (Kuwana).

- Monophlebus corpulentus Kuw., Pr. Cal. Ac. Sci., (3), iii, p. 46 (1902).
 Drosicha corpulenta Ckll., The Entom., xxxv, p. 318 (1902).
 Habitat.—Japan.
 On oak.

22. *Drosicha crawfordi* (Mask.).

Monophlebus crawfordi Mask., Tr. Roy. Soc. S. Austr., pp. 101, 108 (1888).

" " " N. Z. Trans., xxiii, p. 28 (1890).

" " " " " " xxiv, pp. 48, 51 (1891).

" " " " " " xxv, p. 243 (1892).

" " " " " " xxvi, p. 102 (1893).

Drosicha " Ckll., The Entom., xxxv, p. 318 (1902).

Habitat.—Australia.

On Eucalyptus.

***Drosicha crawfordi levis* (Mask.).**

Monophlebus crawfordi var. *levis* Mask., N. Z. Trans., xxv, p. 244 (1892).

" " " " " " xxvi, p. 102 (1893).

***Drosicha crawfordi pilosior* (Mask.).**

Monophlebus crawfordi var. *pilosior* Mask., N. Z. Trans., xxv, p. 244 (1892).

" " " " " " xxvi, p. 102 (1893).

Habitat.—Australia.

* On Eucalyptus.

23. *Drosicha leachii* (Westw.).

Monophlebus Leachii Westw., Arc. Ent., i, p. 22 (1841).

" " Sign., Ann. Soc. Ent. Fr., (5), v, p. 365 (1875).

" " Mask., N. Z. Trans., xxv, p. 245 (1892).

Drosicha leachii Ckll., The Entom., xxxv, pp. 233, 318 (1902).

Habitat.—India.

24. *Drosicha maskelli* (Ckll.).

|| *Monophlebus burmeisteri* Mask. (non Westw.), N. Z. Trans., xxix, p. 327 (1897).

Monophlebus maskelli Ckll., Science, n. s., xv, p. 718 (1902).

Drosicha " " The Entom., xxxv, p. 318 (1902).

Habitat.—Japan; China; Java.

On pine; Ficus; Gardenia florida.

Genus **MONOPHLEBULUS** Ckll. Type, fuscus.

Monophlebus Ckll., The Entom., xxxv, pp. 233, 318 (1902).

25. *Monophlebus fuscus* (Mask.).

Monophlebus fuscus Mask., N. Z. Trans., xxv, p. 244 (1892).

Monophlebus " Ckll., The Entom., xxxv, pp. 233, 318 (1902).

Habitat.—Australia.

Genus **GUERINIA** Targ. Type, serratulæ.

Guerinia Targ., Catalogue, p. 31 (1869): Sign., Ann. Soc. Ent. Fr., (5), v, p. 356 (1875).

26. *Guerinia serratulæ* (Fab.).

- Coccus serratulæ* Fab., Syst. Ent., p. 744 (1775).
 " " " Spec. Ins., ii, p. 395 (1781).
 " " " Mant. Ins., ii, p. 319 (1787).
 " " Gmel., Syst. Nat., Ed. xiii, p. 2220 (1789).
Chermes " Oliv., Ency. Meth., vii, p. 442 (1792).
Coccus " Fab., Ent. Syst., iv, p. 227 (1794).
 " " " Syst. Rhyng., p. 310 (1803).
 " *picridis* Fonsc., Ann. Soc. Ent. Fr., iii, p. 201 (1834).
 " *fabæ* Guér., Bull. Soc. Ent. Fr., (3), iii, p. lxviii (1855).
 " " " Rev. et Mag. Zool., p. 347 (1856).
Cochenille de la Féve Guér., Bull. Soc. Ent. Fr., (3), iv, p. lxxiv (1856).
Coccus fabæ Bdv., Ent. Hort., p. 354 (1867).
Guerinia tinctoria Targ., Catalogue, p. 31 (1869).
 " *serratulæ* Sign., Ann. Soc. Ent. Fr., (5), v, p. 356 (1875).
 " " Targ., Annali di Agr., p. 403 (1884).
 " " Berl. e Leon., Annali di Agr., p. 46 (1898).
 " " " Riv. Pat. Veg., vi, p. 321 (1898).

Habitat.—Algeria: Europe.

On *Serratula*.

Genus *STIGMACOCCUS* Hemp. Type. asper.

- Stigmacoccus* Hemp., Rev. Mus. Paul., iv, p. 399 (1900); Ann. Mag. N. H., (7), vii, p. 110 (1901); Ckll., The Entom., xxxv, p. 233 (1902).
Perissopneumon Newst., Ent. Mon. Mag., xxxvi, p. 250 (1900).

27. *Stigmacoccus asper* Hemp.

- Stigmacoccus asper* Hemp., Rev. Mus. Paul., iv, p. 400 (1900).
 " " " Ann. Mag. N. H., (7), vii, p. 114 (1901).

Habitat.—Brazil.

In nests of *Camponotus*; on bark of *Inga*.

28. *Stigmacoccus ferox* (Newst.).

- Perissopneumon ferox* Newst., Ent. Mon. Mag., xxxvi, p. 250 (1900).
Stigmacoccus " Ckll., The Entom., xxxv, p. 233 (1902).

Habitat.—India.

In ants' nests.

Genus *LOPHOCOCCUS* Ckll. Type. mirabilis.

- Lophococcus* Ckll., The Entom., xxxiv, p. 227 (1901). & xxxv, p. 233 (1902).

29. *Lophococcus mirabilis* Ckll.

- Lophococcus mirabilis* Ckll., The Entom., xxxiv, p. 248 (1901).

Habitat.—Natal.

On *Mimosa*.

Genus **PALÆOCOCCUS** Ckll. Type, fuscipennis.

¶Leachia Sign., Ann. Soc. Ent. Fr., (5), v, p. 359 (1875).

Palæococcus Ckll., Can. Ent., xxvi, p. 36 (1894); The Entom., xxxv, p. 233 (1902).

s. g. *Crypticerya* Ckll., *Psyche* vii, Suppl., I, p. 15 (1895); g. Check List, Suppl., p. 390 (1899). Type, rosæ.

30. *Palæococcus australis* (Mask.).

Icerya rosæ var. *australis* Mask., N. Z. Trans., xxvi, p. 101 (1893).

“ “ “ “ “ “ “ xxviii, p. 406 (1896).

" australis Ckll., Check List, p. 323 (1896).

Palæococcus “ “ The Entom., xxxv, p. 233 (1902).

Habitat.—Australia.

On *Hakea gibbosa*.

31. *Palæococcus braziliensis* (Walk.).

Monophlebus braziliensis Walk., Cat. Br. Mus., Hom., p. 1089 (1852).

“ “ Targ., Catalogue, p. 31 (1869).

Leachia " Sign., Ann. Soc. Ent. Fr., (5), v, p. 359 (1875).

Palæococcus " Ckll., The Entom., xxxv, p. 233 (1902).

Habitat.—S. America.

32. *Palæococcus ewarti* (Newst.).

Icerya ewarti Newst., Ent. Mon. Mag., xxxii, p. 132 (1896).

Crypticerya ewarti Ckll., Check List, Suppl., p. 390 (1899).

Palæococcus " " The Entom., xxxv, p. 233 (1902).

Habitat.—W. Africa.

On "Peppet."

33. *Palæococcus fuscipennis* (Burm.).

?*Coccus hirticornis* Fonsc., Ann. Soc. Ent. Fr., iii, p. 203 (1834).

Monophlebus fuscipennis Burm., Handb. Ent., ii, p. 80 (1835).

Westw., Arc. Ent., i, p. 22 (1841).

hirticornis Targ., Catalogue, p. 31 (1869).

“ fuscipennis Kalt., Die Pflanz., p. 92 (1874).

Leachia. " Sign., Ann. Soc. Ent. Fr., (5), v, p. 351 (1875).

? *Coccus hirticornis* " " " " " " " p. 358 (1875).

Palæococcus fuscipennis Ckll., Check List, p. 322 (1896).

“ Berl. e Leon., *Annali di Agr.*, p. 46 (1898).

Habitat.—Brazil; France; Germany.

On oak ; maple ; fir ; pine.

34. *Palæococcus hellenicus* (Genn.).

Monophlebus hellenicus Genn., Ann. Soc. Ent. Fr., (6), iii, p. 32 (1883).

Palæococcus " Ckll., Check List, p. 322 (1896).

Habitat.—France.

35. *Palæococcus hempeli* (Ckll.).

Icerya hempeli Ckll., Can. Ent., xxxi, p. 43 (1899).

Crypticerya hempeli Hemp., Rev. Mus. Paul., iv, p. 376 (1900).

Habitat.—Brazil.

On Mimosa?

36. *Palæococcus mexicanus* (Ckll. & Parr.).

Crypticerya rosæ var. *mexicana* Ckll. & Parr., Biol. Centr. Amer., ii, pt. 2, p. 4 (1899).

Palæococcus mexicanus Ckll., in litt. (1902).

Habitat.—Mexico.

On Prosopis.

37. *Palæococcus nudatus* (Mask.).

Icerya nudata Mask., N. Z. Trans., xxviii, p. 405 (1896).

Crypticerya “ Ckll. Check List, Suppl., p. 390 (1899).

Habitat.—Australia.

On Cosmos; Verbena.

38. *Palæococcus plucheæ* (Ckll.).

Icerya townsendi var. *plucheæ* Ckll., Jn. N. Y. Ent. Soc., iv, p. 202 (1896).

Crypticerya “ “ “ “ Check List, Suppl., p. 390 (1899).

“ *plucheæ* Ckll., Psyche, ix, pp. 175, 176 (1901).

Palæococcus “ “ The Entom., xxxv, p. 233 (1902).

Habitat.—New Mexico.

On *Pluchea borealis*.

39. *Palæococcus rosæ* (Riley & Howard).

Icerya rosæ Riley & How., Ins. Life, ii, p. 333 (1890).

“ “ “ “ “ “ iii, pp. 93, 94, 95, 97 (1890).

“ “ Ckll., Bull. Bot. Dep. Jam., No. 46, p. 2 (1893).

“ “ Towns. & Ckll., Jn. N. Y. Ent. Soc., vi, p. 168 (1898).

Crypticerya rosæ Ckll., Biol. Centr. Amer., ii, pt. 2, p. 4 (1899).

Palæococcus “ “ The Entom., xxxv, p. 233 (1902).

Habitat.—Fla.; Mex.; Jamaica; Australia.

On rose; sugar-apple; lime; lemon; *Anherstia nobilis*; *Lignum-vitæ*;

Euphorbia; *Prosopis julifera*; *Hakea gibbosa*.

40. *Palæococcus townsendi* (Ckll.).

Icerya townsendi Ckll., Jn. N. Y. Ent. Soc., iv, p. 201 (1896).

Crypticerya “ “ Check List, Suppl., p. 390 (1899).

“ “ “ “ Psyche, ix, p. 175 (1901).

Palæococcus “ “ The Entom., xxxv, p. 233 (1902).

Habitat.—New Mexico.

On *Townsendia grandiflora*; *Gutierrezia sarothræ*; *Picradenia florabunda*; *Grindelia squarrosa*; *Bahia chrysanthemoides*.

Genus **WALKERIANA** Sign. Type, floriger.

Walkeriana Sign., Ann. Soc. Ent. Fr., (5), v, p. 390 (1875): Ckll., Can. Ent., xxxi, p. 274 (1899).

41. *Walkeriana andreæ* Green.

Walkeriana andreæ Green, Ann. Mag. N. H., (7), iii, p. 45 (1899).
Habitat.—Congo, Africa.

42. *Walkeriana compacta* Green.

Walkeriana compacta Green, Ind. Mus. Notes, iv, No. 1, p. 6 (1896).
Habitat.—Ceylon.

43. *Walkeriana euphorbiæ* Green.

Walkeriana euphorbiæ Green, Ind. Mus. Notes, iv, No. 1, p. 6 (1896).
Habitat.—Ceylon.
On *Euphorbia antiquorum*.

44. *Walkeriana floriger* (Walk.).

Coccus floriger Walk., Cat. Br. Mus., Hom., iv, Suppl., p. 205 (1858).
Walkeriana floriger Sign., Ann. Soc. Ent. Fr., (5), v, p. 391 (1875).
Coccus laniger Kirby, Jn. Linn. Soc. Lond., xxiv, p. 175 (1891).
Walkeriana floriger Green, Ind. Mus. Notes, iv, No. 1, p. 6 (1896).
“ “ Ckll., Check List, Suppl., p. 391, note (1899).
Habitat.—Ceylon.
On *Litsea Zeylandica*.

45. *Walkeriana pertinax* Newst.

Walkeriana pertinax Newst., Pr. Zool. Soc. Lond., p. 947, pl. 59, figs. 1—9 (1900).
Walkeriana pertinax Ckll., Science, n. s., xv, p. 717 (1902).
Habitat.—Central Africa.

46. *Walkeriana poleii* Green.

Walkeriana poleii Green, Ind. Mus. Notes, iv, No. 1, p. 6 (1896).
Habitat.—Ceylon.
On *Dodonæa viscosa*.

47. *Walkeriana senex* Green.

Walkeriana senex Green, Ind. Mus. Notes, iv, No. 1, p. 6 (1896).
Habitat.—Ceylon.
On *Dodonæa viscosa*.

Genus **ICERYA** Sign. Type, seychellarum.

Icerya Sign., Ann. Soc. Ent. Fr., (5), v, p. 351 (1875): Comst., Rep. U. S. Dep. Ag., 1880, p. 347 (1881): Mask., Ins. Nox. Agr. N. Z., p. 104 (1887): Ckll., The Entom., xxxv, p. 257 (1902).
Crossotosoma Dougl., Ent. Mon. Mag., xxvi, p. 79 (1890).
s. g. *Proticerya* Ckll., Psyche, vii, Suppl., 1, p. 15 (1895). Type, rileyi.

48. *Icerya ægyptiaca* (Dougl.).*(The Egyptian Mealy Bug.)**Crossotosoma ægyptiacum* Dougl., Ent. Mon. Mag., xxvi, p. 79 (1890).

An Egyptian mealy bug, Riley & How., Ins. Life, ii, p. 256 (1890).

Icerya ægyptiacum " " " " iii, pp. 97, 105 (1890).

" " " " " p. 423 (1891).

" *ægyptiaca* Newst., Ent. Mon. Mag., xxix, p. 167 (1893).

" " Mask., N. Z. Trans., xxvi, p. 99 (1893).

" *ægyptiacum* Riley & How., Ins. Life, v, p. 361 (1893).

" " " " " vi, pp. 46, 137 (1893).

" *ægyptiaca* Mask., Ins. Life, vi, p. 268 (1894)." *ægyptiacum* Riley & How., Ins. Life, vii, pp. 51, 271 (1894).

" " Cotes, Ind. Mus. Notes, iii, No. 5, p. 48 (1894).

" *ægyptiaca* Newst., Ent. Mon. Mag., xxxiii, p. 60 (1896).

" " " Jn. Roy. Hor. Soc., xxiii, p. 36 (1900).

Habitat.—Egypt; India; Australia; Ceylon.

On *Ficus*; *Croton*; *Goodenia ovata*; *Aristolochia saccata*.**49. *Icerya albolutea* Ckll.***Icerya seychellarum* var. *albolutea* Ckll., The Entom., xxxi, p. 259 (1898)." *albolutea* Ckll., Ent. Mon. Mag., xxxviii, p. 86 (1902).

Habitat.—W. Africa.

On *Anona squamosa*.**50. *Icerya braziliensis* Hemp.***Icerya braziliensis* Hemp., Rev. Mus. Paul., iv, p. 370 (1900).

" " " Ann. Mag. N. H., (7), vi, p. 389 (1900).

Habitat.—Brazil.

On *Liriodendron tulipifera*; *Laurus camphora*; *Codiaeum*.**51. *Icerya crocea* Green.***Icerya crocea* Green, Ind. Mus. Notes, iv, No. 1, p. 7 (1896).

Habitat.—Ceylon.

On *Citrus*; *Croton*; *Cocculus*.**52. *Icerya formicarum* Newst.***Icerya formicarum* Newst., Ent. Mon. Mag., xxxiii, p. 169 (1897).

Habitat.—India.

In ants' nests.

53. *Icerya koebelei* Mask.*Icerya koebelei* Mask., Ent. Mon. Mag., xxviii, p. 184 (1892).

" " " N. Z. Trans., xxv, p. 245 (1892).

Habitat.—Australia.

On *Leptospermum laevigatum*; *Acacia*.

54. *Icerya littoralis* Ckll.

Icerya (*Proticerya*) *littoralis* Ckll., Ann. Mag. N. H., (7), i, p. 429 (1898).

" " " Towns. & Ckll., Jn. N. Y. Ent. Soc., vi, p. 168 (1898).

Habitat.—Mexico.

On Croton.

***Icerya littoralis mimosæ* Ckll.**

Icerya littoralis var. *mimosæ* Ckll., Ann. Mag. N. H., (7), i, p. 430 (1898).

Habitat.—Mexico.

On Mimosa.

55. *Icerya montserratensis* Riley & Howard.

Icerya montserratensis Riley & How., Ins. Life, iii, pp. 99, 101 (1890).

" " " " " " " iv, p. 407 (1892).

" " Ckll., Bull. Bot. Dep. Jam., No. 46, p. 2 (1893).

Habitat.—West Indies: Mexico; Grenada.

On Chrysophyllum; *Clusia alba*; palms; orange; banana; avocado pear.

56. *Icerya natalensis* (Dougl.).

Ortonia natalensis Dougl., Ent. Mon. Mag., xxv, p. 86 (1888).

" " " " " " " pp. 232, 233 (1889).

Icerya " Ckll., Check List, p. 323 (1896).

Habitat.—Natal.

On Acacia; orange; lemon.

57. *Icerya palmeri* Riley & Howard.

Icerya palmeri Riley & How., Ins. Life, iii, p. 104 (1890).

" " Ckll., Bull. 7, N. Mex. Exp. Sta., p. 14 (1892).

" " Newst., Ent. Mon. Mag., xxxiii, p. 170 (1897).

" " Towns. & Ckll., Jn. N. Y. Ent. Soc., vi, p. 167 (1898).

Habitat.—Mexico.

On grape-vine; Coursetia.

58. *Icerya pilosa* Green.

Icerya pilosa Green, Ind. Mus. Notes, iv, No. 1, p. 7 (1896).

Habitat.—Ceylon.

On grass.

59. *Icerya purchasi* Mask.

(*The Cottony Cushion Scale*.)

(*Fluted Scale*.)

Icerya purchasi Mask., N. Z. Trans., xi, p. 221 (1878).

" " Comst., Rep. U. S. Dep. Ag., 1880, p. 347 (1881).

" " Saund., Ins. Inj. to Fruits, p. 400 (1883).

" " Mask., N. Z. Trans., xvi, p. 140 (1883).

" " " " " " " xvii, p. 30 (1884).

" " Targ., Annali di Agr., p. 385 (1884).

- Icerya purchasi* Hubbard, Ins. Aff. the Orange, p. 66 (1885).
- “ “ Mask., N. Z. Trans., xix, p. 45 (1886).
- “ “ “ “ “ “ xx, p. 104 (1887).
- “ “ “ Ins. Nox. Agr. N. Z., p. 104 (1887).
- “ “ Riley, Rep. U. S. Dep. Ag., 1886, p. 466 (1887).
- “ “ Penzig, Annali di Agr., p. 534 (1887).
- “ “ Ormerod, Notes on “ Australian Bug ” in S. Afr. (1887).
- “ “ Morse, Bull. 71, Cal. Exp. Sta., (1887).
- “ “ Riley, Pacific Rural Express, June 11, (1887).
- “ “ “ Bull. 15, Div. Ent. Dep. Ag., (1887).
- “ “ Comst., Intr. Ent., p. 139 (1888).
- “ “ Riley, Ins. Life, 1, pp. 92, 126. (1888).
- “ “ Mask., Bull. 32, Kew Gardens, p. 191 (1889).
- “ “ Dougl., Ent. Mon. Mag., xxv, p. 232 (1889).
- “ “ How., Can. Ent., xxi, p. 182 (1889).
- “ “ Riley, Ins. Life, i, pp. 260, 377 (1889).
- “ “ Willits “ “ ii, p. 15 (1889).
- “ “ Koebele, Bull. 21, Div. Ent. Dep. Ag., p. 9 (1890).
- “ “ Lint., 6th Rep. Ins. N. Y., p. 104 (1890).
- “ “ Riley & How., Ins. Life, iii, p. 439 (1891).
- “ “ Coq., Ins. Life, iii, p. 457 (1891).
- “ “ Riley & How., Ins. Life, iv, p. 215 (1891).
- “ “ Enock, Tr. Ent. Soc. Lond., p. 361 (1891).
- “ “ Lint., 7th Rep. Ins. N. Y., App., p. 361 (1891).
- “ “ Riley, Ins. Life, vi, p. 135 (1893).
- “ “ Coq., “ “ “ p. 176 (1893).
- “ “ Wight, “ “ “ p. 194 (1893).
- “ “ French, Handb. Destr. Ins., Victoria, p. 37 (1893).
- “ “ Mask., N. Z. Trans., xxvi, pp. 17, 277 (1893).
- “ “ Riley & How., Ins. Life, vi, p. 347 (1894).
- “ “ “ “ “ “ vii, p. 271 (1894).
- “ “ Ckll., Jn. Trin. Nat. Club, i, p. 3 (1894).
- “ “ Comst., Man. Ins., p. 166 (1895).
- “ “ Smith, Econ. Ent., p. 108 (1896).
- “ “ Lounsb., Rep. Ent. Cape Good Hope, p. 92 (1896).
- “ “ Webster, Bull. 2, n. s., Dep. Ag., p. 82 (1896).
- “ “ Berl., Boll. Ent. Agr., No. 12 (1897).
- “ “ Berl. e Leon., Annali di Agr., p. 15 (1898).
- “ “ Leon., Riv. Pat. Veg., vi, p. 293 (1898).
- “ “ Berl. e Leon., Cherm. Ital., Fasc. iii, No. 72 (1898).
- “ “ Forbes, 20th Rep. Ins. Ill., p. 22 (1898).
- “ “ Howard, Bull. 10, n. s., Dep. Ag., p. 89 (1898).
- “ “ Lounsb., Rep. Ent. Cape Good Hope, p. 21 (1898).
- “ “ Berl., Boll. Ent. Agr., No. 4, p. 361 (1898).
- “ “ Marlatt, Yearbook U. S. Dep. Ag., p. 278 (1900).
- “ “ Jordan & Kellogg, Animal Life, p. 142, fig. 79 (1900).

Icerya purchasi Quaint. & Scott, Cocc. Amer., Dec. iii-iv, No. 1 (1901).

" " Gossard, Bull. 56, Fla. Exp. Sta., p. 312 (1901).

" " Fuller, 1st Rep. Ent. Natal, p. 104 (1901).

" " Frog., Agr. Gaz. N. S. W., July, p. 20 (1902).

Habitat.—N. Zealand; Australia; S. Africa; Fiji; Sandwich Islands; Portugal; Trinidad; Mexico: U. S.

On orange; lemon; Cypress; pine; rose; Pittospermum; Acacia; grass; etc. Full list in Rep. U. S. Dep. Ag., 1886, p. 741 (1887).

***Icerya purchasi crawii* Ckll.**

Icerya purchasi var. *crawii* Ckll., Psyche, viii, p. 94 (1897).

Habitat.—California.

***Icerya purchasi maskelli* Ckll.**

Icerya purchasi var. *maskelli* Ckll., Psyche, viii, p. 94 (1897).

" " " " Towns. & Ckll., Jn. N. Y. Ent. Soc., vi, p. 166 (1898).

Habitat.—California.

On orange.

60. *Icerya rileyi* Ckll.

Icerya rileyi Ckll., Psyche, vii, Suppl., I, p. 15 (1895).

" " " Am. Nat., xxix, p. 588 (1897).

" " " Ckll. & Parr., The Industrialist, p. 281 (1899).

Habitat.—New Mexico; Mexico.

On Mesquite; Larrea.

61. *Icerya schrottkyi* Hemp.

Icerya schrottkyi Hemp., Rev. Mus. Paul., iv, p. 373 (1900).

" " " Ann. Mag. N. H., (7), vi, p. 391 (1900).

Habitat.—Brazil.

62. *Icerya seychellarum* (Westw.).

Dorthesia seychellarum Westw., Gard. Chron., p. 830 (1855).

Coccus sacchari Guér., Rev. et Mag. Zool., (2), xix, p. 451 (1867).

Orthezia seychellarum Targ., Catalogue, p. 30 (1869).

Coccus sacchari Sign., Ann. Soc. Ent. Fr., (4), ix, pp. 93, 94 (1869).

Icerya " " " " " " (5), v, p. 352 (1875).

" " Riley, Ins. Life, i, p. 129 (1888).

" " Riley & How., Ins. Life, iii, p. 105 (1890).

" seychellarum Mask., N. Z. Trans., xxix, p. 329 (1897).

" " de Charm., Pr. Soc. Amic. Scien., p. 47 (1899).

Habitat.—Seychelles Islands; Mauritius; Madeira; China; New Zealand; Formosa.

On sugar cane; guava; palms; rose; Citrus; Podocarpus.

63. *Icerya tangalla* Green.

Icerya tangalla Green, Ind. Mus. Notes, iv, p. 7 (1896).

Habitat.—Ceylon.

On *Gutierrezia sarothrae*.

Subfamily MARGARODINÆ.

Genus **MARGARODES** Guilding. Type, formicarum.

Margarodes Guilding, Tr. Linn. Soc. Lond., xvi, p. 115 (1828): Lataste, Actes Soc. Sci. Chili, vii, pp. 99, 102 (1897): Ckll., Am. Nat., xxxiii, p. 415 (1899).

Porphyrophora Brandt, Mediz. Zool., ii, p. 355 (1833); Mem. Acad. St. Petersb. (6), iii, pt. 2, p. 66 (1833): Sign., Ann. Soc. Ent. Fr., (5), v, p. 377 (1875).

Sphæraspis Giard, C. R. Soc. Biol., Paris, (10), iv, No. 25, p. 683 (1897).
Type, capensis.

64. Margarodes capensis (Giard).

Sphæraspis capensis Giard, C. R. Soc. Biol., (10), No. 25, p. 683 (1897).

Margarodes " Ckll., Check List, Suppl., p. 390 (1899).

Habitat.—Europe.

65. Margarodes formicarum Guild.

Margarodes formicarum Guild., Tr. Linn. Soc. Lond., p. 115 (1828).

" " Sign., Ann. Soc. Ent. Fr., (5), v, p. 385 (1875).

" " Comst., Rep. U. S. Dep. Ag., 1880, p. 277 (1881).

" " Uhler, St. Nat. Hist., ii, p. 218 (1884).

" " Ckll., Bull. Bot. Dep. Jam., p. 17 (1894).

" " Giard, C. R. Soc. Biol., Paris, p. 710 (1894).

" " Howard, Ins. Life, vii, p. 359 (1895).

" " Leon., Riv. Pat. Veg., iii, p. 362 (1895).

Habitat.—Antigua; Bahama Islands; East Indies.

66. Margarodes gallica (Sign.).

Porphyrophora gallica Sign., Ann. Soc. Ent. Fr., (5), v, p. 380 (1875).

Habitat.—France.

67. Margarodes hamelii (Brandt).

Coccus hamelii Brandt, Mediz. Zool., ii, p. 355 (1833).

Cochenille am Ararat, Hamel, Mem. Acad. St. Petersb., (6), iii, pt. 2, p. 9 (1834).

Porphyrophora hameli Brandt, Mem. Acad. St. Petersb., (6), iii, pt. 2, p. 65 (1834).

Porphyrophora hamelii Burm., Handb. Ent., ii, p. 78 (1835).

" armeniaca " " " " p. 78 (1835).

" hameli Targ., Catalogue, p. 30 (1869).

" hamelii Sign., Ann. Soc. Ent. Fr., (5), v, pp. 380, 383 (1875).

" hameli Blanch., Les Coccides utiles, pp. 99 (1883).

Habitat.—Armenia: Europe.

On Poa pungens.

68. *Margarodes hiemalis* Ckll.

Margarodes hiemalis Ckl., Am. Nat., xxxiii, p. 416 (1899).

“ “ “ Can. Ent., xxxi, p. 36 (1899).

Habitat.—New Mexico.

69. *Margarodes perrisii* (Sign.).

Porphyrophora perrisii Sign., Ann. Soc. Ent. Fr., (5), v, p. 381 (1875).

Habitat.—France.

70. *Margarodes polonicus* (Linn.).

Coccus polonicus Linn., Syst. Nat., Ed. x, i, p. 456 (1758).

“ “ “ Faun. Suec., p. 265 (1761).

Chermes radicum purpureus Geoff., Abr. Ins., i, p. 504 (1762).

Coccus polonicus Linn., Syst. Nat., Ed. xii, i, p. 741 (1766).

“ “ Fab., Syst. Ent., p. 744 (1775).

“Mod., Act. Goth., i, p. 34 (1778).

“ Fab., Spec. Ins., ii, p. 395 (1781).

Chermes " Fourc., Ent. Paris, p. 228 (1785).

Coccus " Fab., Mant. Ins., ii, p. 319 (1787).

“ “ Gmel., Syst. Nat., Ed. xiii, p. 2219 (1789).

“ Oliv., *Ency. Meth.*, vi, p. 96 (1791).

“ “ Fab., Ent. Syst., iv, p. 227 (1794).

“ “ Schr., Fauna Boica, ii, pt. 1, p. 1

“ Fab., Syst. Rhynq., p. 310 (1803).

“ “ Latr., *Animal Kingdom*, [Cuvier], ii, p. 78 (1829).

Porphyrophora polonicus Brandt, Mediz. Zool., ii, p. 356 (1833).

" frischii " " " " p. 225 (1833).

“ “ “ Mem. Acad. St. Petersburg, (6), iii, pt. 2, p.

67 (1834).

Porphyrophora polonica Burm., Handb. Ent., ii, p. 78 (1835).

Dactylopius polonicus Costa, Faun. Reg. Nap., Cocc., p. 17 (1835).

Porphyrophora “ Blanch., Hist. Nat. Ins., iii, p. 212 (1840).

“ Hagen, Stett. Ent. Zeit., xvi, p. 110 (1855).

“ *frischii* Targ., Catalogue, p. 30 (1869).

" (*Coccus*) *polonica* Kalt., Die Pflanz., p. 502 (1874).

" polonica Sign., Ann. Soc. Ent. Fr., (5), v, pp. 380, 382 (1875).

“ “ Blanch., Les Coccides utiles, p. 94 (1883).

“ polonicus Ckll., Pr. Ac. N. Sci. Ph., p. 260 (1899).

Habitat.—Europe; Mexico.

On *Scleranthus perennis*.

71. *Margarodes rileyi* Giard.

Margarodes rileyi Giard, C. R. Soc. Biol., Paris, p. 710 (1894).

“ Ckl., Am. Nat., xxxiii, p. 415 (1899).

Habitat.—Europe; Florida Keys; West Indies.

72. *Margarodes trimeni* Giard.

Margarodes trimeni Giard, C. R. Soc. Biol., Paris, iv, pp. 126, 412, 712 (1894).

Habitat.—S. Africa.

73. *Margarodes vitium* (Giard).

Heterodera vitis F. Phil., Bull. Soc. Nat. Chili (1884). [Imperfectly described].

Margarodes vitium Giard, C. R. Soc. Biol., Paris, pp. 126, 412, 710 (1894).

“ “ “ Actes Soc. Sci. Chili, iv, pp. lxx, cxvi, ccix (1894).

" " Lataste, " " " " " pp. lx, cxxxii (1894).

“ Peglion, Riv. Pat. Veg., ii, p. 392 (1894).

“ “ Leon., “ “ “ iii, p. 362 (1895).

“ Giard, C. R. Soc. Biol., Paris, p. 383 (1895).

“ Lataste, *Ann. Soc. Sci. Chili*, iv, p. ccxxix (1895). ”

“trilobitum Reed, Ent. News., vi, p. 86 (1895).

“ vitis Ckll., “ “ “ p. 123 (1895).

vitium Howard, Pr. Ent. Soc. Wash., iv, p. 33, (1896).

" Mayet, Ann. Soc. Ent. Fr., (7), vi, p. 419 (1896).

“ “ “ Bull. “ “ “ “ “ p. cxxxvi (1896).

“ Giard, *Actes Soc. Sci. Chili*, v, pp. xxxi, xliii, cii (1896).

“ “ Lataste, “ “ “ “ “ p. cxxxvi (1896).

“ Ckll., Am. Nat., xxxiii, p. 416 (1899).

"vitis Sharp, Cambridge Nat. Hist., vi, p. 598 (1899).

Habitat.—Chili.

On the roots of grapevine.

Genus **CŒLOSTOMIDIA** Ckll. [new name.] Type, zealandica.

|| *Cælostoma* Mask., N. Z. Trans., xii, p. 294 (1879); Ins. Nox. Agr. N. Z., p. 107 (1887); N. Z. Trans., xxv, p. 241 (1892).

-Cœlostomidia Ckll., Nature, p. 367 (1900).

74. *Cœlostomidia assimilis* (Mask.).

Cælostoma assimile Mask., N. Z. Trans., xxii, p. 153 (1889).

“ “ “ “ “ xxiii, p. 30 (1890).

“ “ “ Ent. Mon. Mag., xxvi, p. 279 (1890).

“ Hubbard, Bull. 18, n. s., Dep. Ag., p. 17 (1898).

Cælostomidia assimilis Ckll., The Entom., xxxv, p. 258 (1902).

Habitat.—New Zealand.

On *Fagus menziesii*; *F. fusca*; *Phyllocladus trichomanes*.

75. *Cœlostomidia compressa* (Mask.).

Cœlostoma compressum Mask., N. Z. Trans., xxiv, p. 45 (1891).

Cœlostomidia compressa Ckil., The Entom., xxxv. p. 258 (1902).

Habitat.—N. Zealand.

On Podocarpus totara.

76. *Cœlostomidia pilosa* (Mask.).

Cælostoma pilosum Mask., N. Z. Trans., xxiii, p. 29 (1890).

“ “ “ “ “ xxiv, p. 49 (1891).

Cælostomidia pilosa Ckll., The Entom., xxxv, p. 258 (1902).

Habitat.—New Zealand.

On Podocarpus totara; Fagus.

77. Cœlostomidia wairoensis (Mask.).

Cœlostoma wairoense Mask., N. Z. Trans., xvi, p. 141 (1883).

“ “ “ Ins. Nox. Agr. N. Z., p. 109 (1887).

Cœlostomidia wairoensis Ckll., The Entom., xxxv, p. 258 (1902).

Habitat.—New Zealand.

On *Phormium tenax*; *Leptospermum scoparium*.

78. Cœlostomidia zealandica (Mask.).

Cœlostoma zealandicum Mask., N. Z. Trans., xii, p. 299 (1879).

“ “ “ “ “ “ xiv, p. 226 (1881).

“ “ “ “ “ “ xix, p. 42 (1886).

“ “ “ Ins. Nox. Agr. N. Z., p. 107 (1887).

“ “ “ Tr. Roy. Soc. S. Austr., p. 101 (1888).

“ “ “ Hubbard, Bull. 18, n. s., Dep. Ag., p. 17 (1898).

Cœlostomidia zealandica Ckll., The Entom., xxxv, p. 258 (1902).

Habitat.—New Zealand.

On *Muhlenbeckia adpressa*; *Rhipogonum scandens*.

Genus **CALLIPAPPUS** Guérin. Type, *westwoodii*.

Callipappus Guérin-Meneville, Rev. Zool., p. 129 (1841); Amy. & Serv., Hist.

Nat. Ins., Hem., p. 619 (1843); Sign., Ann. Soc. Ent. Fr., (5), v, p. 374

(1875); Full., Tr. Ent. Soc. Lond., p. 435 (1899); Ckll., The Entom., xxxv, p. 258 (1902).

79. Callipappus australis (Mask.).

Cœlostoma australis Mask., Pr. Linn. Soc. N. S. Wales, p. 280 (1890).

“ “ “ N. Z. Trans., xxv, p. 242 (1892).

“ “ “ “ “ “ xxvii, p. 69 (1894).

Callipappus “ Ckll., The Entom., xxxv, p. 258 (1902).

Habitat.—Australia.

On *Eucalyptus*; *Augophora*.

80. Callipappus bufo Full.

Callipappus bufo Full., Notes on Cocc. W. Austr., p. 11 (1897).

“ “ “ Tr. Ent. Soc. Lond., p. 438 (1899).

Habitat.—W. Australia.

On *Casuarina humilis*; *Banksia attenuata*; *B. menziesii*; *B. ilicifolia*.

81. Callipappus farinosus Full.

Callipappus farinosus Full., Notes on Cocc. W. Austr., p. 10 (1897).

“ “ “ Tr. Ent. Soc. Lond., p. 437 (1899).

Habitat.—W. Australia.

On *Casuarina*.

82. Callipappus immanis (Mask.).

Cœlostoma immane Mask., N. Z. Trans., xxiv, p. 49 (1891).

“ “ “ “ “ “ xxv, p. 241 (1892).

“ “ “ “ “ “ xxvii, p. 69 (1894).

“ “ “ Tepp., Tr. Roy. Soc. S. Austr., xxiii, p. 278 (1899).

Callipappus immanis Ckll., The Entom., xxxv, p. 258 (1902).

Habitat.—Australia.

On *Acacia aneura*; *Eucalyptus*.

83. *Callipappus rubiginosus* (Mask.).

Cœlostoma rubiginosum Mask., N. Z. Trans., xxv, p. 242 (1892).

Callipappus rubiginosus Ckll., The Entom., xxxv, p. 258 (1902).

Habitat.—Australia.

On *Banksia integrifolia*.

84. *Callipappus westwoodii* Guérin.

Callipappus westwoodii Guér., Rev. Zool., xii, p. 129 (1841).

“ “ Sign., Ann. Soc. Ent. Fr., (5), v, p. 375 (1875).

“ “ Full., Notes on Cocc. W. Austr., p. 11 (1897).

“ “ “ Tr. Ent. Soc. Lond., p. 437 (1899).

Habitat.—Australia.

On *Eucalyptus*.

Genus **KUWANIA** Ckll. [new name.] Type, *quercus*.

||*Sasakia Kuwana*, Pr. Cal. Ac. Sci., (3), iii, p. 47 (1902): Ckll., The Entom., xxxv, p. 258 (1902).

Kuwanian Ckll., in litt., (1902.)

85. *Kuwanian quercus* (Kuwana).

Sasakia quercus Kuw., Pr. Cal. Ac. Sci., (3), iii, p. 47 (1902).

Habitat.—Japan.

On oak.

86. *Kuwanian zeylanicus* (Green).

Monophlebus zeylanicus Green, Ind. Mus. Notes, iv, p. 6 (1896).

Habitat.—Ceylon.

On *Antidesma bunius*.

Genus **XYLOCOCCLUS** Loew. Type, *filiferus*.

Xylococcus Loew, Verh. z. b. Ges., Wien, xxxii, p. 271 (1882): Sign., Bull.

Soc. Ent. Fr., (6), ii, p. clxxxv (1882): Hubbard, Bull. 18, n. s., Dep. Ag., p. 18, (1898): Ckll., The Entom., xxxv, p. 259 (1902).

87. *Xylococcus betulæ* Perg.

Xylococcus betulæ Perg., Bull. 18, n. s., Dep. Ag., pp. 18, 19 (1898).

Habitat.—Lake Superior region.

On birch.

88. *Xylococcus filiferus* Loew.

Xylococcus filiferus Loew, Verh. z. b. Ges., Wien, pp. 271, 274 (1882).

“ “ Sign., Bull. Soc. Ent. Fr., (6), ii, p. clxxxv (1882).

“ “ Mask., Ent. Mon. Mag., xxvi, p. 278 (1890).

“ “ Hubbard, Bull. 18, n. s., Dep. Ag., p. 17 (1898).

Habitat.—Austria.

On *Tilia europæa*; *T. grandifolia*.

89. *Xylococcus quercus* Ehrh.

Xylococcus quercus Ehrh., Can. Ent., xxxii, p. 311 (1900).

Habitat.—California.

On *Quercus chrysolepis*.

Subfamily ORTHEZIINÆ.

Genus **ORTHEZIA** Bosc. Type, characias = urticae.

Orthezia Bosc, Journ. de Phys., xxiv, p. 173 (1784): Latr., Gen. Crust. et Ins., iii, p. 175 (1802): Amy. & Serv., Hist. Nat. Ins., Hem., p. 620 (1843): Sign., Ann. Soc. Ent. Fr., (5), v, p. 386 (1875): Dougl., Ent. Mon. Mag., xvii, p. 176 (1881): Comst., Rep. U. S. Dep. Ag., 1880, p. 349 (1881): Lounsb., 32nd Rep. Mass. Ag. Coll., p. 121 (1895): Giard, Bull. Soc. Ent. Fr., lxxvii, p. 8 (1898): Ckll., The Entom., xxxv, p. 259 (1902).

Dorthesia l'Abbé d'Orthez, Journ. de Phys., xxvi, p. 207 (1785).

Cionops Leach, Edinb. Ency., ix, pt. 1, p. 126 (1815).

Cyphoma Gistel, Naturges. des Theirreiche, p. 151 (1848).

90. *Orthezia americana* (Walk.).

Dorthesia americana Walk., Cat. Br. Mus., Hom., iv, p. 1091 (1852).

“ “ Sign., Ann. Soc. Ent. Fr., (4), viii, p. 843 (1868).

Orthezia “ Comst., Rep. U. S. Dep. Ag., 1880, p. 349 (1881).

“ “ “ 2nd Rep. Dep. Ent. Corn. Univ., p. 136 (1883).

Dorthesia “ Dougl., Ent. Mon. Mag., xxvii, p. 246 (1891).

Orthezia “ Lounsb., 32nd Rep. Mass. Ag. Coll., p. 124 (1895).

“ “ Osborn, Contr. Ia. Ag. Coll., p. 2 (1898).

Habitat.—Canada; New York; Iowa.

91. *Orthezia annæ* Ckll.

Orthezia annæ Ckll., Ann. Mag. N. H., (6), xii, p. 403 (1893).

“ “ “ Can. Ent., xxvi, p. 285 (1894).

“ “ Lounsb., 32nd Rep. Mass. Ag. Coll., p. 123 (1895).

Habitat.—New Mexico; Arizona; Colorado.

On *Chenopodium*; *Atriplex canescens*.

92. *Orthezia artemisiæ* Ckll.

Orthezia artemisiæ Ckll., Can. Ent., xxx, p. 19 (1898).

Habitat.—New Mexico.

On *Artemisia* (sage-bush).

93. *Orthezia cataphracta* (Shaw).

Coccus cataphractus Shaw, Nat. Misc., v, pl. 182 (1794).

“ “ “ Gen. Zool., vi, p. 194 (1806).

Dorthesia cataphracta Westw., Mod. Class. Ins., ii, p. 445 (1840).

“ chiton Zett., Ins. Lapp., p. 314 (1840).

- Orthezia signoreti F. B. White, Scottish Naturalist, iv, p. 160 (1877).
 Dorthesia chiton Hart., The Entom., xiii, p. 284 (1880).
 Orthezia signoreti Dougl., Ent. Mon. Mag., xvii, pp. 172, 205 (1881).
 " cataphracta " Tr. Ent. Soc. Lond., p. 299; Proc., p. ix (1881).
 Dorthesia " " Ent. Mon. Mag., xvii, p. 173 (1881).
 Orthezia " Loew, Wien. Ent. Zeit., i, p. 190 (1882).
 " " Lounsb., 32nd Rep. Mass. Agr. Coll., p. 127 (1895).
 " uva Blanch., Ann. Soc. Ent. Fr., lxxv, p. 681 (1896).
 " cataphracta Giard, Bull. Soc. Ent. Fr., lxxvii, p. 8 (1898).
 Habitat.—Greenland; Lapland; Norway; Scotland; Ireland; Northern England.
 On grass; Saxifraga aizoon.

94. Orthezia cheilanthi Tins.

- Orthezia cheilanthi Tins., Can. Ent., xxx, p. 12 (1898).
 Habitat.—Organ Mts., New Mexico.
 On Cheilanthes fendleri.

95. Orthezia delavauxii (Thieb.).

- Dorthesia delavauxii Thieb., Mem. Soc. Linn., Paris, iii, p. 285 (1825).
 ?Coccus glecomæ " Fab.", Dougl., Ent. Mon. Mag., xvii, p. 175 (1881).
 Dorthesia delavauxii " " " " " p. 203 (1881).
 Orthezia " Giard, Bull. Soc. Ent. Fr., lxxvii, p. 10 (1898).
 Habitat.—France.
 On Teucrium scorodonia.

96. Orthezia garryæ Ckll.

- Orthezia garryæ Ckll., Ann. Mag. N. H., (7), ii, p. 401 (1898).
 Habitat.—New Mexico.

97. Orthezia graminis Tins.

- Orthezia graminis Tins., Can. Ent., xxx, p. 13 (1898).
 Habitat.—New Mexico.
 On grass.

98. Orthezia insignis Dougl.

(The Greenhouse Orthezia.)

- Orthezia insignis Dougl., Jn. Quekett Micr. Club, p. 169 (1887).
 " " " Ent. Mon. Mag., xxiv, p. 169 (1888).
 " " " " " xxv, p. 270 (1889).
 " " McIntire, Timahri, p. 308 (1889).
 " " Ward, " p. 304 (1890).
 " " Ckll., Jn. Inst. Jam., i, p. 136 (1892).
 " " Trimen, Ann. Rep. Roy. Bot. Gard., Ceylon (1893).
 " " Ckll., Ann. Mag. N. H., (6), xii, pp. 51, 403 (1893).
 " " " Can. Ent., xxvi, p. 35 (1894).
 " nacreæ Buck., Ind. Mus. Notes, iii, No. 3, p. 103 (1894).

Orthezia insignis Green, "Tropical Agriculturist," p. 437 (1895).

" " Lounsb., 32nd Rep. Mass. Ag. Coll., p. 111 (1895).

" " Morris, Bull. Kew Gardens, p. 162 (1895).

" " Dougl., Ent. Mon. Mag., xxxi, p. 137 (1895).

" " Ckll., Ann. Mag. N. H., (6), xvi, p. 60 (1895).

" " Green, "An Insect Enemy" (1895).

" " " Ind. Mus. Notes, iv, p. 6 (1896).

" *nacrea* Barlow, " " " " p. 25 (1896).

" *insignis* Craw, 5th Rep. Cal. Bd. Hort., p. 46 (1896).

" " Green, Ent. Mon. Mag., xxxiii, p. 74 (1897).

" " Lounsb., Rep. Ent. Cape Good Hope, p. 36 (1898).

" " Berl. e Leon., Cherm. Ital., Fasc. iii, No. 73 (1898).

" " de Charm., Pr. Soc. Amic. Scien., p. 46 (1899).

" " Green, Circ. Roy. Bot. Gard., Ceylon, p. 83 (1899).

" " Hemp., Rev. Mus. Paul., iv, p. 376 (1900).

" " Newst., Jn. Roy. Hor. Soc., xxiii, p. 34 (1900).

" " Full., 1st Rep. Ent. Natal, p. 109 (1901).

Habitat.—England; S. Africa; Mauritius; Ceylon; China; Brazil; British Guiana; Trinidad; Jamaica; Mexico; U. S.

On *Coleus*; *Lantana*; *Ipomœa*; *Thunbergia*; *Strobilanthus*; *Verbena*; *Achillea*; *Salvia*; *Cuphea*; *Capsicum*; *Ageratum*; *Vernonia*; *Gardenia*; *Chrysanthemum*; *Lonicera*; various species of *Citrus*; tea plant; strawberry; tomato, and many other plants.

99. *Orthezia lasiorum* Ckll.

Orthezia lasiorum Ckll., Can. Ent., xxxiii, p. 209 (1901).

Habitat.—New Mexico.

In nests of *Lasius americanus*.

100. *Orthezia mænariensis* Dougl.

Orthezia mænariensis Dougl., Tr. Ent. Soc. Lond., p. 81 (1884).

" " Karsch, Ent. Nach., xi, p. 381 (1885).

" " Lounsb., 32nd Rep. Mass. Ag. Coll., p. 132 (1895).

Habitat.—Island of Montecristo, Italy.

On *Erica arborea*.

101. *Orthezia monticola* Ckll.

Orthezia monticola Ckll., Ann. Mag. N. H., (7), ii, p. 402 (1898).

Habitat.—New Mexico.

102. *Orthezia nigrocincta* Ckll.

Orthezia nigrocincta Ckll., Am. Nat., xxix, p. 730 (1897).

" " " Can. Ent., xxx, p. 20 (1898).

Habitat.—New Mexico.

On *Gutierrezia*.

103. *Orthezia occidentalis* Dougl.

- Orthezia occidentalis* Dougl., Ent. Mon. Mag., xxvii, p. 245 (1891).
 " " Ckll., Tr. Am. Ent. Soc., xx, p. 366 (1893).
 " " " Ann. Mag. N. H., (6), xii, p. 404 (1893).
 " " " Pr. U. S. Nat. Mus., xvii, p. 623, note (1895).
 " " Lounsb., 32nd Rep. Mass. Ag. Coll., p. 122 (1895).

Habitat.—Col.; N. Mex.

In ants' nests.

104. *Orthezia praelonga* Dougl.

- Orthezia praelonga* Dougl., Ent. Mon. Mag., xxvii, p. 246 (1891).
 " " Lounsb., 32nd Rep. Mass. Ag. Coll., p. 126 (1895).
 " " Hemp., Rev. Mus. Paul., iv, p. 377 (1900).

Habitat.—British Guiana; Brazil; Jamaica; Trinidad.

On Capsicum; Croton; Citrus; Sanchezia.

105. *Orthezia sonorensis* Ckll.

- Orthezia sonorensis* Ckll., Bull. 4, T. s., Dep. Ag., pp. 10, 38 (1896).

Habitat.—Mexico.

On Hymenoclea monogyra.

106. *Orthezia ultima* Ckll.

- Orthezia ultima* Ckll., Can. Ent., xxxiv, p. 88 (1902).

Habitat.—Argentine Republic.

On Compositæ?

107. *Orthezia urticae* (Linn.).

- Aphis urticae* Linn., Syst. Nat., Ed. xii, i, p. 736 (1766).
Orthesia characias Bosc, Journ. de Phys., xxiv, p. 173 (1784).
Dorthesia " " " " " xxvi, p. 207 (1785).
 " " Gmel., Syst. Nat., Ed. xiii, p. 2208 (1789).
 " " Rossi, Faun. Etrusc., p. 262 (1790).
Coccus " Oliv., Ency. Meth., vi, p. 99 (1791).
 " *dubius* Fab., Ent. Syst., iv, p. 228 (1794).
 " " Panz., Faun. Germ., xxxvi, p. 21 (1796).
Aphis urticata Stewart, Elem. Nat. Hist., ii, p. 110 (1802).
Dorthesia characias Fab., Syst. Rhyng., p. 311 (1803).
 " " Latr., Gen. Crust. et Ins., p. 175 (1807).
 " " Leach, New Edinb. Ency., viii, pt. 2 (1815).
Coccus dubius Kirby & Spence, Intr. Ent., iii, p. 183 (1828).
 " " Dufour, Rech. Hem., p. 102 (1833).
 " " Burm., Handb. Ent., ii, p. 76 (1835).
Dorthesia urticae " " " " p. 76 (1835).
 " *characias* Lam., Hist. Nat. Anim., iv, p. 116 (1835).
 " " Westw., Mod. Class. Ins., i, pl. 1, fig. 8 (1839).
Coccus dubius Blanch., Hist. Nat. Ins., iii, p. 212 (1840).
Orthezia urticae Amy. & Serv., Hem., p. 624 (1843).

- Dorthesia characias* Amy., Monom., p. 544 (1848).
Orthezia " Newm., Pr. Ent. Soc. Lond., p. 4 (1856).
 " " Targ., Studii sul. Cocc., p. 24 (1867).
 ?*Dorthesia dispar* Kalt., Die Pflanz., p. 486 (1874).
 " *urticæ* " " " p. 11 (1874).
 " " Mark, Anat. Coccidae, p. 15 (1876).
 ?*Dorthesia dispar* Sign., Ann. Soc. Ent. Fr., (5), vi, p. 614 (1876).
Orthezia characias Riley, Am. Ent., iii, p. 20 (1880).
Dorthesia " Dougl., Ent. Mon. Mag., xvii, pp. 174, 204 (1881).
Orthezia urticæ " " " " " p. 174 (1881).
 " " " Tr. Ent. Soc. Lond., p. 297 (1881).
 ? " *dispar* " Ent. Mon. Mag., xvii, p. 204 (1881).
 " *urticæ* Loew, Wien. Ent. Zeit., iii, pp. 11, 16 (1884).
 " " Lounsb., 32nd Rep. Mass. Ag. Coll., p. 129 (1895).
 " *dispar* Ckll., Check List, p. 327 (1896).
 " *characias* Blanch., Ann. Soc. Ent. Fr., lxx, p. 679 (1896).
 " *urticæ* " " " " " p. 679 (1896).
 " " Giard, Bull. " " " lxxvii, p. 10 (1898).

Habitat.—Europe.

On *Matricaria*; *Caltha*; *Teucrium*; *Leontodon hastilis*; *Tunica saxifraga*; *Achillæa*; *Dodder*.

Genus **NEWSTEADIA** Green. Type, *floccosa*.

s. g. *Newsteadia* Green, Ent. Mon. Mag., xxxviii, p. 285 (1902): g. Ckll., in litt. (1902).

108. *Newsteadia floccosa* (De Geer).

- Coccus floccosus* De G., Mem. Ins., vii, p. 604 (1778).
Dorthesia " Kirby & Spence, Intr. Ent., iii, p. 183 (1826).
Orthezia urticæ Sign., Ann. Soc. Ent. Fr., (4), viii, pl. xi, fig. 13 (1868).
 " *floccosa* Targ., Catalogue, p. 29 (1869).
 " *urticæ* Sign., Ann. Soc. Ent. Fr., (5), v, p. 389 (1875) in part.
Coccus floccosus Dougl., Ent. Mon. Mag., xvii, pp. 174, 204, note (1881).
Orthezia floccosa " Tr. Ent. Soc. Lond., p. 447 (1881).
 " *normani* " " " " " p. 300, & Proc. ix. (1881).
 " *floccosa* Lounsb., 32nd Rep. Mass. Ag. Coll., p. 131 (1895).
 " " Giard, Bull. Soc. Ent. Fr., lxxvii, p. 9 (1898).
 " (*Newsteadia*) *floccosa* Green, Ent. Mon. Mag., xxxviii, p. 284 (1902).

Newsteadia floccosa Ckll., in litt. (1902).

Habitat.—Europe; Australia.

On grasses and sedges.

Genus **ORTHEZIOLA** Sulc. Type, *vej dovskyi*.

Ortheziola Sulc, Sitzb. K. Bohm. Ges. Wiss., No. 44, p. 5 (1894).

109. Ortheziola fodiens Giard.

Ortheziola fodiens Giard. C. R. Soc. Biol., Paris, (10), iv, p. 583 (1897).

Habitat.—Guadeloupe.

On roots of coffee-tree.

110. Ortheziola signoreti (Haller).

Orthezia signoreti Haller, Mitth. Schw. Ent. Ges., vi, p. 6 (1880).

Ortheziola “ Giard, Bull. Soc. Ent. Fr., lxxvii, p. 11 (1898).

Habitat.—France.

111. Ortheziola vej dovskiyi Sulc.

Ortheziola vej dovskiyi Sulc, Sitzb. K. Bohm. Ges. Wiss., No. 44, p. 5 (1894).

“ “ Ckll., Ann. Mag. N. H., (6), xvi, p. 137 (1895).

Habitat.—Prague.

Under leaves and moss.

Subfamily PHENACOLEACHIINÆ.

Genus **PHENACOLEACHIA** Ckll. Type, *zealandica*.

Phenacoleachia Ckll., Can. Ent., xxxi, p. 274 (1899); *Nature*, lxi, p. 367 (1900).

112. Phenacoleachia zealandica (Mask.).

Leachia zealandica Mask., N. Z. Trans., xxiii, p. 26 (1890).

“ “ “ Ent. Mon. Mag., xxxii, p. 225 (1896).

Palæococcus “ Ckll., Check List, p. 322 (1896).

Phenacoleachia zealandica Ckll., Can. Ent., xxxi, p. 274 (1899).

Habitat.—New Zealand.

On *Podocarpus totara*; *Cupressus dacrydioides*; *Fagus*.

Subfamily CONCHASPINÆ.

Genus **CONCHASPIS** Ckll. Type, *anagræci*.

Conchaspis Ckll., Gard. Chron., (3), xiii, p. 548 (1893); *Journ. Inst. Jam.*, i, p. 256 (1893); *Bull. Bot. Dep. Jam.*, p. 101 (1895); *Green, Cocc. Ceylon*, pt. i, p. 19 (1896).

Pseudinglisia Newst., Ent. Mon. Mag., xxix, p. 153 (1893).

113. Conchaspis anagræci Ckll.

Conchaspis anagræci Ckll., Gard. Chron., (3), xiii, p. 548 (1893).

“ “ “ *Journ. Inst. Jam.*, i, p. 246 (1893).

Pseudinglisia rodrigueziae Newst., Ent. Mon. Mag., xxix, p. 153 (1893).

Conchaspis angræci Ckll., Bull. Bot. Dep. Jam., p. 101 (1895).

Habitat.—Jamaica: Trinidad; England.

On *Angræcum*; *Rodriguezia secunda*.

***Conchaspis angræci hibisci* Ckll.**

Conchaspis angræci var. *hibisci* Ckll., Psyche, vii, Suppl. 1, p. 19 (1896).

“ “ “ “ “ Bull. 4, T. s., Dep. Ag., p. 36 (1896).

Habitat.—Mexico.

On *Hibiscus floridanus*.

114. *Conchaspis newsteadi* Ckll.

Conchaspis newsteadi Ckll., Can. Ent., xxix, p. 270 (1897).

Habitat.—Mexico.

On Zuchil-tree (*Plumieria*).

115. *Conchaspis socialis* Green.

Conchaspis socialis Green, Cocc. Ceylon, pt. i, p. 20 (1896).

Habitat.—Ceylon.

Subfamily DACTYLOPIINÆ.

Genus **FRENCHIA** Mask. Type, casuarinæ.

Frenchia Mask., N. Z. Trans., xxiv, p. 56 (1891); Ckll., Can. Ent., xxxi, p. 276 (1899).

116. *Frenchia casuarinæ* Mask.

Frenchia casuarinæ Mask., N. Z. Trans., xxiv, pp. 57, 58 (1891).

“ “ Frog., Agr. Gaz. N. S. W., p. 15 (1898).

Habitat.—Australia.

On *Casuarina equisetifolia*; *C. quadrivalvis*.

117. *Frenchia semioculta* Mask.

Frenchia semioculta Mask., N. Z. Trans., xxvii, p. 70 (1894).

“ “ Frog., Agr. Gaz. N. S. W., p. 15 (1898).

Habitat.—Australia.

On *Casuarina*.

Genus **APIOMORPHA** Rübs.

|| *Brachyscelis* Schrader, Tr. Ent. Soc. N. S. W., i, p. 1 (1862); Sign., Ann.

Soc. Ent. Fr., (4), vi, p. 593 (1876); Frog., Agr. Gaz. N. S. W., May, p. 8

(1898); Ckll., Can. Ent., xxxi, p. 276 (1899).

Apiomorpha [new name] Rübs., Berl. Ent. Zeit., xxxix, pp. 201, 204 (1894).

118. *Apiomorpha attenuata* (Frog.).

Brachyscelis attenuata Frog., Pr. Linn. Soc. N. S. W., p. 375 (1898).

Habitat.—S. Australia.

On *Eucalyptus*.

119. *Apiomorpha bauerleni* (Frog.).

Brachyscelis bauerleni Frog., Pr. Linn. Soc. N. S. W., p. 359 (1892).

“ “ Tepp., Tr. Roy. Soc. S. Austr., p. 272 (1893).

Apiomorpha “ Rübs., Berl. Ent. Zeit., xxxix, pp. 208, 213 (1894).

Brachyscelis “ Frog., Agr. Gaz. N. S. W., ix, p. 11 (1898).

Habitat.—New South Wales, Australia.

On *Eucalyptus*.

120. *Apiomorpha beyeriae* (Tepp.).

Brachyscelis beyeriae Tepp., Tr. Roy. Soc. S. Austr., p. 276 (1893).

Apiomorpha “ Ckll., Check List, p. 328 (1896).

Habitat.—Australia.

On *Beyeria opaca*.

121. *Apiomorpha calycina* (Tepp.).

Brachyscelis calycina Tepp., Tr. Roy. Soc. S. Austr., p. 275 (1893).

Apiomorpha “ Ckll., Check List, p. 328 (1896).

Brachyscelis “ Frog., Agr. Gaz. N. S. W., p. 13 (1898).

Habitat.—S. Australia.

On *Eucalyptus dumosa*.

***Apiomorpha calycina neumani* (Tepp.).**

Brachyscelis neumani Tepp., Tr. Roy. Soc. S. Austr., p. 275 (1893).

“ “ Frog., Agr. Gaz. N. S. W., p. 13 (1898).

Habitat.—S. Australia.

On *Eucalyptus dumosa*; *E. oleosa*.

122. *Apiomorpha citricola* (Schrad.).

Brachyscelis citricola Schrad., Tr. Ent. Soc. N. S. W., i, p. 3 (1862).

“ “ “ Verh. z. b. Ges. Wien, p. 160 (1863).

“ “ Sign., Ann. Soc. Ent. Fr., (5), vi, p. 597 (1876).

Habitat.—Australia.

123. *Apiomorpha conica* (Frog.).

Brachyscelis conica Frog., Pr. Linn. Soc. N. S. W., p. 365 (1892).

“ “ Tepp., Tr. Roy. Soc. S. Austr., p. 272 (1893).

“ regularis “ “ “ “ “ “ p. 273 (1893).

Apiomorpha conica Rübs., Berl. Ent. Zeit., xxxix, pp. 209, 213 (1894).

“ similis “ “ “ “ “ “ “ pp. 210, 213 (1894).

Brachyscelis regularis Full., Agr. Gaz. N. S. W., vii, p. 4 (1896).

“ “ Frog., “ “ “ “ “ “ ix, p. 12 (1898).

“ conica “ “ “ “ “ “ “ p. 12 (1898).

Habitat.—N. S. Wales; S. Australia.

On *Eucalyptus viminalis*.

Apiomorpha conica subconica (Tepp.).

Brachyscelis subconica Tepp., Tr. Roy. Soc. S. Austr., p. 274 (1893).

“ “ Frog., Agr. Gaz. N. S. W., ix, p. 12 (1898).

Apiomorpha var. “ Ckll., Check List, p. 328 (1896).

Habitat.—S. Australia.

On *Eucalyptus uncinata*.

124. *Apiomorpha cucurbita* Full.

Apiomorpha cucurbita Full., Notes on Cocc. W. Austr., p. 9 (1897).

“ “ “ Tr. Ent. Soc. Lond., p. 446 (1899).

Habitat.—W. Australia.

125. *Apiomorpha dipsaciformis* (Frog.).

Brachyscelis dipsaciformis Frog., Pr. Linn. Soc. N. S. W., p. 202 (1895).

Apiomorpha “ Ckll., Check List, p. 328 (1896).

Brachyscelis “ Frog., Agr. Gaz. N. S. W., p. 13 (1898).

Habitat.—North Queensland.

126. *Apiomorpha duplex* (Schrad.).

Brachyscelis duplex Schrad., Tr. Ent. Soc. N. S. W., i, p. 2 (1862).

“ “ “ Verh. z. b. Ges. Wien, p. 160 (1863).

“ “ Sign., Ann. Soc. Ent. Fr., (5), vi, p. 596 (1876).

“ “ Frog., Pr. Linn. Soc. N. S. W., p. 358 (1892).

“ “ Tepp., Tr. Roy. Soc. S. Austr., p. 272 (1893).

“ “ Frog., Nat. Science, v, p. 111 (1894).

“ “ Full., Agr. Gaz. N. S. W., p. 3 (1896).

Apiomorpha “ Ckll., Check List, p. 328 (1896).

Brachyscelis “ Frog., Agr. Gaz. N. S. W., p. 10 (1898).

Habitat.—N. S. Wales; S. Australia.

On *Eucalyptus*.

127. *Apiomorpha ellipsoidalis* (Tepp.).

Brachyscelis ellipsoidalis Tepp., Tr. Roy. Soc. S. Austr., p. 272 (1893).

Habitat.—W. Australia.

On *Eucalyptus*.

128. *Apiomorpha excupula* (Full.).

Brachyscelis excupula Full., Agr. Gaz. N. S. W., p. 9 (1896).

Apiomorpha “ Ckll., Check List, Suppl., p. 393 (1899).

Habitat.—N. S. Wales.

129. *Apiomorpha floralis* (Frog.).

Brachyscelis floralis Frog., Pr. Linn. Soc. N. S. W., p. 376 (1898).

Habitat.—Central Australia.

On *Eucalyptus*.

130. *Apiomorpha helmsii* Full.

Apiomorpha helmsii Full., Notes on Cocc. W. Austr., p. 9 (1897).

" " " Tr. Ent. Soc. Lond., p. 447 (1899).

Habitat.—W. Australia.

On *Eucalyptus*.

131. *Apiomorpha karschi* (Rübs.).

Brachyscelis karschi Rübs., Berl. Ent. Zeit., xxxix, pp. 211, 213 (1894).

" " Frog., Agr. Gaz. N. S. W., p. 13 (1898).

Apiomorpha " Full., Tr. Ent. Soc. Lond., p. 444 (1899).

***Apiomorpha karschi fletcheri* (Full.).**

Brachyscelis fletcheri Full., Agr. Gaz. N. S. W., p. 7 (1896).

Apiomorpha " Full., Notes on Cocc. W. Austr., p. 8 (1897).

" " Full., Tr. Ent. Soc. Lond., p. 444 (1899).

Habitat.—N. S. Wales; W. Australia.

On *Eucalyptus*.

132. *Apiomorpha maliformis* Full.

Apiomorpha maliformis Full., Notes on Cocc. W. Austr., p. 9 (1897).

" " " Tr. Ent. Soc. Lond., p. 446 (1899).

Habitat.—W. Australia.

On *Eucalyptus patens*.

133. *Apiomorpha minor* (Frog.).

Brachyscelis minor Frog., Pr. Linn. Soc. N. S. W., p. 363 (1892).

" " Tepp., Tr. Roy. Soc. S. Austr., p. 272 (1893).

Apiomorpha " Ckll., Check List, p. 328 (1896).

Brachyscelis " Frog., Agr. Gaz. N. S. W., p. 11 (1898).

Habitat.—N. S. Wales.

On *Eucalyptus hæmastoma*.

134. *Apiomorpha munita* (Schräd.).

Brachyscelis munita Schräd., Tr. Ent. Soc. N. S. W., p. 2 (1862).

" " " Verh. z. b. Ges. Wien, p. 160 (1863).

" " Sign., Ann. Soc. Ent. Fr., (5), vi, p. 597 (1876).

" " Frog., Pr. Linn. Soc. N. S. W., p. 359 (1892).

" " Tepp., Tr. Roy. Soc. S. Austr., pp. 271, 273 (1893).

" *reducta* " " " " " p. 271 (1893).

" *foliosa* " " " " " p. 273 (1893).

Apiomorpha cornifex Rübs., Berl. Ent. Zeit., xxxix, p. 205 (1894).

Brachyscelis munita Full., Agr. Gaz. N. S. W., p. 3 (1896).

" " Frog., " " " " " p. 9 (1898).

" " Lidg., The Wombat, iv, p. 93 (1899).

Habitat.—Australia.

On *Eucalyptus robusta*.

Apiomorpha munita tricornis (Frog.).

Brachyscelis tricornis Frog., Pr. Linn. Soc. N. S. W., p. 361 (1892).

Apiomorpha " Ckll., Check List, p. 328 (1896).

Brachyscelis " Frog., Agr. Gaz. N. S. W., p. 10 (1898).

Apiomorpha munita var. *tricornis* Ckll., Check List, Suppl., p. 393 (1899).

Habitat.—Australia.

On *Eucalyptus siderophloia*.

Apiomorpha munita munitior Full.

Apiomorpha munita var. *munitior* Full., Tr. Ent. Soc. Lond., p. 445 (1899).

Habitat.—W. Australia; N. S. Wales.

135. Apiomorpha ovicola (Schrad.).

Brachyscelis ovicola Schrad., Tr. Ent. Soc. N. S. W., p. 3 (1862).

" " " Verh. z. b. Ges. Wien, p. 160 (1863).

" " Sign., Ann. Soc. Ent. Fr., (5), vi, p. 596 (1876).

" " Frog., Pr. Linn. Soc. N. S. W., p. 367 (1892).

" " Tepp., Tr. Roy. Soc. S. Austr., p. 272 (1893).

" " Frog., Agr. Gaz. N. S. W., p. 11 (1898).

Apiomorpha " Ckll., Check List, p. 328 (1896).

Habitat.—N. S. Wales; W. Australia.

On *Eucalyptus hæmastoma*; *E. gracilis*; *E. leucoxylon*.

Apiomorpha ovicola glabra (Tepp.).

Brachyscelis glabra Tepp., Tr. Roy. Soc. S. Austr., p. 278 (1893).

Apiomorpha ovicola var. *glabra* Ckll., Check List, p. 328 (1896).

" *glabra* Full., Tr. Ent. Soc. Lond., p. 445 (1899).

Habitat.—Australia.

On *Eucalyptus rostrata*.

136. Apiomorpha ovicoloides (Tepp.).

Brachyscelis ovicoloides Tepp., Tr. Roy. Soc. S. Austr., p. 277 (1893).

Apiomorpha " Ckll., Check List, p. 328 (1896).

Habitat.—Australia.

On *Eucalyptus incrassata*.

137. Apiomorpha pedunculata (Full.).

Brachyscelis pedunculata Full., Agr. Gaz. N. S. W., pp. 4, 212 (1896).

Apiomorpha " Ckll., Check List, p. 328 (1896).

Brachyscelis " Frog., Agr. Gaz. N. S. W., p. 14 (1898).

Habitat.—Australia.

On *Eucalyptus*.

138. Apiomorpha pharetrata (Schrad.).

Brachyscelis pharetrata Schrad., Tr. Ent. Soc. N. S. W., p. 3 (1862).

" " " Verh. z. b. Ges. Wien, pl. 3, fig. 2 (1863).

" " Sign., Ann. Soc. Ent. Fr., (5), vi, p. 595 (1876).

" " Frog., Pr. Linn. Soc. N. S. W., p. 370 (1892).

" " " Nat. Science, v, p. 111 (1894).

- Brachyscelis pharetrata Full., Agr. Gaz. N. S. W., p. 3 (1896).
 Apiomorpha " Ckll., Check List, p. 328 (1896).
 Brachyscelis " Frog., Agr. Gaz. N. S. W., p. 14 (1898).
 Habitat.—N. S. Wales.
 On Eucalyptus sieberiana; E. corymbosa; E. capitellata.

139. Apiomorpha pileata (Schrad.).

- Brachyscelis pileata Schrad., Tr. Ent. Soc. N. S. W., p. 3 (1862).
 " " " Verh. z. b. Ges. Wien, p. 190 (1863).
 " " Sign., Ann. Soc. Ent. Fr., (5), vi, p. 593 (1876).
 " " Frog., Pr. Linn. Soc. N. S. W., p. 362 (1892).
 " " Tepp., Tr. Roy. Soc. S. Austr., p. 272 (1893).
 " " Frog., Nat. Science, v, p. 112 (1894).
 Apiomorpha " Ckll., Check List, p. 328 (1896).
 Brachyscelis " Frog., Pr. Linn. Soc. N. S. W., p. 372 (1898).
 " " " Agr. Gaz. N. S. W., p. 10 (1898) (larva).
 Habitat.—N. S. Wales.
 On Eucalyptus robusta.

140. Apiomorpha pomiformis (Frog.).

- Brachyscelis pomiformis Frog., Pr. Linn. Soc. N. S. W., p. 367 (1892).
 " " Tepp., Tr. Roy. Soc. S. Austr., p. 272 (1893).
 Apiomorpha " Ckll., Check List, p. 328 (1896).
 Brachyscelis " Frog., Agr. Gaz. N. S. W., p. 12 (1898).
 Habitat.—Australia.
 On Eucalyptus rostrata.

141. Apiomorpha rosæformis (Frog.).

- Brachyscelis rosæformis Frog., Pr. Linn. Soc. N. S. W., p. 204 (1895).
 Apiomorpha rosiformis Ckll., Check List, p. 328 (1896).
 Brachyscelis rosæforma Frog., Agr. Gaz. N. S. W., p. 14 (1898).
 Habitat.—N. S. Wales.

142. Apiomorpha rugosa (Frog.).

- Brachyscelis rugosa Frog., Pr. Linn. Soc. N. S. W., p. 369 (1892).
 " " Tepp., Tr. Roy. Soc. S. Austr., p. 272 (1893).
 " " Full., Agr. Gaz. N. S. W., p. 3 (1896).
 Apiomorpha " Ckll., Check List, p. 328 (1896).
 Brachyscelis " Frog., Agr. Gaz. N. S. W., p. 11 (1898).
 Habitat.—Australia.
 On Eucalyptus.

143. Apiomorpha sessilis (Frog.).

- Brachyscelis sessilis Frog., Pr. Linn. Soc. N. S. W., x, p. 203 (1895).
 Apiomorpha " Ckll., Check List, p. 328 (1896).
 Brachyscelis " Frog., Agr. Gaz. N. S. W., p. 13 (1898).
 Habitat.—N. S. Wales.
 On Eucalyptus.

144. *Apiomorpha sloanei* (Frog.).

Brachyscelis sloanei Frog., Pr. Linn. Soc. N. S. W., p. 373 (1898).

Habitat.—N. S. Wales.

On "White-Gum."

145. *Apiomorpha strombylosa* (Tepp.).

Brachyscelis strombylosa Tepp., Tr. Roy. Soc. S. Austr., p. 277 (1893).

" " Full., Agr. Gaz. N. S. W., p. 4 (1896).

" *crispa* " " " " p. 5 (1896).

" *strombylosa* Frog., " " " " p. 11 (1898).

Apiomorpha " Full., Tr. Ent. Soc. Lond., p. 445 (1899).

Habitat.—Australia.

On *Eucalyptus incrassata*.

146. *Apiomorpha thorntoni* (Frog.).

Brachyscelis thorntoni Frog., Pr. Linn. Soc. N. S. W., p. 371 (1892).

" " Tepp., Tr. Roy. Soc. S. Austr., p. 272 (1893).

" " Full., Agr. Gaz. N. S. W., p. 3 (1896).

" " Frog., " " " " p. 14 (1898).

Apiomorpha " Ckll., Check List, Suppl., p. 393 (1899).

Habitat.—Australia.

***Apiomorpha thorntoni nux* (Full.).**

Brachyscelis nux Full., Agr. Gaz. N. S. W., p. 6 (1896).

Apiomorpha thorntoni var. *nux* Ckll., Check List, Suppl., p. 393 (1899).

Habitat.—N. S. Wales; S. Australia.

On *Eucalyptus*.

147. *Apiomorpha turbinata* (Lidg.).

Brachyscelis turbinata Lidg., Science Gossip, Aug., p. 77 (1901).

Habitat.—Victoria, Australia.

148. *Apiomorpha umbellata* (Frog.).

Brachyscelis umbellata Frog., Pr. Linn. Soc. N. S. W., p. 336 (1893).

Apiomorpha " Ckll., Check List, p. 328 (1896).

Brachyscelis " Frog., Agr. Gaz. N. S. W., p. 11 (1898).

Habitat.—N. S. Wales.

On *Eucalyptus*.

149. *Apiomorpha urnalis* (Tepp.).

Brachyscelis urnalis Tepp., Tr. Roy. Soc. S. Austr., p. 274 (1893).

" " Frog., Pr. Linn. Soc. N. S. W., p. 371 (1898).

" " " Agr. Gaz. N. S. W., p. 13 (1898).

" " Lidg., The Wombat, iii, p. 93 (1898).

Apiomorpha " Ckll., Check List, Suppl., p. 393 (1899).

Habitat.—N. S. Wales.

On *Eucalyptus uncinata*; *E. gracilis*; *E. meliodora*; *E. polyanthema*.

Apiomorpha urnalis schraderi (Full.).

Brachyscelis schraderi Full., Agr. Gaz. N. S. W., p. 6 (1896).

Apiomorpha urnalis var. *schraderi* Ckll., Check List, Suppl., p. 393 (1899).

Habitat.—N. S. Wales.

On *Eucalyptus*.

150. Apiomorpha variabilis (Frog.).

Brachyscelis variabilis Frog., Pr. Linn. Soc. N. S. W., p. 364 (1892).

“ “ Tepp., Tr. Roy. Soc. S. Austr., p. 272 (1893).

“ “ Frog., Nat. Science, v, p. 112 (1894).

Apiomorpha “ Ckll., Check List, p. 328 (1896).

Brachyscelis “ Frog., Pr. Linn. Soc. N. S. W., p. 374 (1898).

“ “ “ Agr. Gaz. N. S. W., p. 12 (1898).

Habitat.—N. S. Wales; Australia.

On *Eucalyptus piperita*.

Genus **OPISTHOSCELIS** Schrader. Type, subrotunda.

Opisthoscelis Schrader., Tr. Ent. Soc. N. S. W., i, p. 10 (1862); Verh. z. b.

Ges. Wien, xiii, p. 189 (1863); Sign., Ann. Soc. Ent. Fr., (5), vi, p. 597

(1876); Rübs., Berl. Ent. Zeit., xxxix, p. 214 (1894); Frog., Agr. Gaz. N.

S. W., p. 16 (1898); Ckll., Can. Ent., xxxi, p. 276 (1899).

151. Opisthoscelis conica Full.

Opisthoscelis conica Full., Notes on Cocc. W. Austr., p. 11 (1897).

“ “ “ Tr. Ent. Soc. Lond., p. 464 (1899).

Habitat.—W. Australia.

On *Eucalyptus*.

152. Opisthoscelis fibularis Frog.

Opisthoscelis fibularis Frog., Pr. Linn. Soc. N. S. W., p. 344 (1893).

“ “ “ Agr. Gaz. N. S. W., p. 17 (1898).

Habitat.—N. S. Wales.

On *Eucalyptus*.

153. Opisthoscelis globosa Rübs.

Opisthoscelis globosa Rübs., Berl. Ent. Zeit., xxxix, pp. 213, 214, 219 (1894).

“ “ “ Frog., Agr. Gaz. N. S. W., p. 16 (1898).

Habitat.—N. S. Wales.

On *Eucalyptus capitellata*.

154. Opisthoscelis maculata Frog.

Opisthoscelis maculata Frog., Pr. Linn. Soc. N. S. W., p. 345 (1893).

“ “ “ Agr. Gaz. N. S. W., p. 17 (1898).

Habitat.—N. S. Wales.

On *Eucalyptus gracilis*; *E. leucoxydon*.

155. *Opisthoscelis mammularis* Frog.*Opisthoscelis mammularis* Frog., Pr. Linn. Soc. N. S. W., p. 344 (1893).

" " " Agr. Gaz. N. S. W., p. 17 (1898).

Habitat.—Australia.

On Eucalyptus.

156. *Opisthoscelis maskelli* Frog.*Opisthoscelis maskelli* Frog., Pr. Linn. Soc. N. S. W., p. 340 (1893).

" " " Agr. Gaz. N. S. W., p. 16 (1898).

Habitat.—Australia.

On Eucalyptus.

157. *Opisthoscelis nigra* Frog.*Opisthoscelis nigra* Frog., Pr. Linn. Soc. N. S. W., p. 376 (1893).

Habitat.—N. S. Wales.

On Eucalyptus.

158. *Opisthoscelis pisiformis* Frog.*Opisthoscelis pisiformis* Frog., Pr. Linn. Soc. N. S. W., p. 343 (1893).

" " " Agr. Gaz. N. S. W., p. 17 (1898).

Habitat.—N. S. Wales, Australia.

On Eucalyptus melliodora; E. robusta; E. piperita; E. resinifera.

159. *Opisthoscelis serrata* Frog.*Opisthoscelis serrata* Frog., Pr. Linn. Soc. N. S. W., p. 346 (1893).

" " " Agr. Gaz. N. S. W., p. 17 (1898).

Habitat.—Australia.

On Eucalyptus.

160. *Opisthoscelis spinosa* Frog.*Opisthoscelis spinosa* Frog., Pr. Linn. Soc. N. S. W., p. 341 (1893).

" " " Agr. Gaz. N. S. W., p. 17 (1898).

Habitat.—Australia.

On Eucalyptus siderophloia.

161. *Opisthoscelis subrotunda* Schrad.*Opisthoscelis subrotunda* Schrad., Tr. Ent. Soc. N. S. W., p. 10 (1862).

" " Sign., Ann. Soc. Ent. Fr., (5), vi, p. 597 (1876).

" " Frog., Pr. Linn. Soc. N. S. W., p. 210 (1893).

" " Rübs., Berl. Ent. Zeit., xxxix, p. 213 (1894).

Habitat.—Australia.

On Eucalyptus capitellata.

Opisthoscelis subrotunda gracilis* Schrad.Opisthoscelis gracilis* Schrad., Tr. Ent. Soc. N. S. W., p. 10 (1862).

" " Sign., Ann. Soc. Ent. Fr., (5), vi, p. 598 (1876).

" " Rübs., Berl. Ent. Zeit., xxxix, p. 213 (1894).

" subrotunda var. *gracilis* Ckll., Check List, p. 328 (1896).

Habitat.—Australia.

162. *Opisthoscelis verrucula* Frog.

Opisthoscelis verrucula Frog., Pr. Linn. Soc. N. S. W., p. 338 (1893).

“ “ “ Agr. Gaz. N. S. W., p. 17 (1898).

Habitat.—Australia.

On *Eucalyptus*.

Genus **ASCELIS** Schrader. Type, *præmollis*.

Ascelis Schrad., Tr. Ent. Soc. N. S. W., p. 10 (1862): Sign., Ann. Soc. Ent.

Fr., (5), vi, p. 598 (1876): Ckll., Can. Ent., xxxi, p. 276 (1899).

Cystococcus Full., Tr. Ent. Soc. Lond., p. 462 (1899).

163. *Ascelis attenuata* Frog.

Ascelis attenuata Frog., Pr. Linn. Soc. N. S. W., p. 214 (1893).

“ “ “ Agr. Gaz. N. S. W., p. 16 (1898).

Habitat.—Australia.

On *Eucalyptus piperita*.

164. *Ascelis echiniformis* (Full.).

Cystococcus echiniformis Full., Notes on Cocc. W. Austr., p. 11 (1897).

“ “ “ Tr. Ent. Soc. Lond., p. 462 (1899).

Ascelis “ Ckll., in litt. (1902).

Habitat.—W. Australia.

On *Eucalyptus tessellaris*.

165. *Ascelis melaleucæ* Full.

Ascelis melaleucæ Full., Notes on Cocc. W. Austr., p. 12 (1897).

“ “ “ Tr. Ent. Soc. Lond., p. 461 (1899).

Habitat.—W. Australia.

On *Melaleuca*.

166. *Ascelis præmollis* Schrad.

Ascelis præmollis Schrad., Tr. Ent. Soc. N. S. W., p. 10 (1862).

“ “ Sign., Ann. Soc. Ent. Fr., (5), vi, p. 599 (1876).

“ “ Frog., Pr. Linn. Soc. N. S. W., p. 211 (1893).

“ “ “ Nat. Science, v, p. 113 (1894).

“ “ “ Agr. Gaz. N. S. W., p. 15 (1898).

Habitat.—Australia.

On *Eucalyptus corymbosa*.

167. *Ascelis schraderi* Frog.

Ascelis schraderi Frog., Pr. Linn. Soc. N. S. W., p. 213 (1893).

“ “ “ Agr. Gaz. N. S. W., p. 15 (1898).

Habitat.—N. S. Wales, Australia.

On *Eucalyptus corymbosa*.

Genus **ASTEROLECANIUM** Targ. Type, aureum.

- Asterolecanium* Targ., Intr. 2nd Mem. Studi Cocc., Catalogue, p. 41 (1869): Sign., Ann. Soc. Ent. Fr., (4), x, p. 276 (1870); Targ., Bull. Soc. Ent. Ital., p. 311 (1892); Ckll., Bull. Bot. Dep. Jam., p. 1 (1896); Ckll., Can. Ent., xxxi, p. 276 (1899).
Planchonia Sign., Ann. Soc. Ent. Fr., (4), x, p. 282 (1870); Mask., N. Z. Trans., xiv, p. 223 (1881); Ins. Nox. Agr. N. Z., p. 91 (1887); Ann. Mag. N. H., (6), xvi, p. 134 (1895).
Asterodiaspis Sign., Bull. Soc. Ent. Fr., (5), vi, p. ccix (1876); Comst., Rep. U. S. Dep. Ag., 1880, p. 329 (1881).

168. *Asterolecanium algeriense* (Newst.).

- Planchonia algeriensis* Newst., Tr. Ent. Soc. Lond., p. 99 (1897).
Asterolecanium algeriense Ckll., Check List, Suppl., p. 393 (1899).
 Habitat.—Algeria.
 On *Spartium junceum*.

169. *Asterolecanium arabidis* (Licht.).

- Planchonia arabidis* "Licht.," Sign., Ann. Soc. Ent. Fr., (5), vi, p. 608 (1876).
 " " Ckll., Journ. Inst. Jam., i, p. 79 (1892).
Asterolecanium " " Check List, p. 327 (1896).
 Habitat.—France.
 On *Arabis stricta*.

170. *Asterolecanium aureum* (Bdv.).

- Coccus aureus* Bdv., Insectologie Agricole, ii, p. 301 (1868).
 " " Targ., Catalogue, p. 41 (1869).
Asterolecanium aureum Sign., Ann. Soc. Ent. Fr., (4), x, p. 277 (1870).
 " " " " " " (5), vi, p. 614 (1876).
 " " Ckll., Journ. Inst. Jam., i, p. 77 (1892).
 " " Mask., The Entom., xxvii, p. 94 (1894).
 " " Ckll., Bull. Bot. Dep. Jam., p. 8 (1896).
 Habitat.—West Indies; Europe, on imported plants.
 On *Calathea vittata*; *Oncidium*.

171. *Asterolecanium bambusæ* Bdv.

- Asterolecanium bambusæ* Bdv., Insectologie Agricole (1869).
 " " Sign., Ann. Soc. Ent. Fr., (4), x, p. 280 (1870).
 " " Ckll., Journ. Inst. Jam., i, p. 77 (1892).
 " " Mask., The Entom., xxvii, p. 94 (1894).
 " " Ckll., Bull. Bot. Dep. Jam., p. 9 (1896).
Planchonia (*Asterolecanium*) *bambusæ* Newst., Ent. Mon. Mag., xxxiii, p. 75 (1897).
Planchonia bambusæ de Charm., Pr. Soc. Amic. Scien., p. 42 (1899).
 " " Hemp., Rev. Mus. Paul., iv, p. 409 (1900).
 Habitat.—Algeria; Ceylon; Mauritius; Brazil; Grenada; West Indies; Mexico.

Asterolecanium bambusæ bambusulæ Ckll.

Asterolecanium bambusæ var. *bambusulæ* Ckll., Am. Nat., xxxi, p. 590 (1897).

Habitat.—India.

On bamboo.

172. Asterolecanium bornmuelleri Rübs.

Asterolecanium bornmuelleri Rübs., Zool. Jahrb., p. 316. pl. 15, fig. 34 (1902).

Habitat.—Persia.

On *Quercus persica*.

173. Asterolecanium delicatum (Green).

Planchonia delicata Green, Ind. Mus. Notes, iv, No. 1, p. 5 (1896).

Asterolecanium delicatum Ckll., Check List, p. 328 (1896).

Habitat.—Ceylon; Japan.

On *Arundinaria*; *Bambusa tessellata*.

174. Asterolecanium epacridis (Mask.).

Planchonia epacridis Mask., N. Z. Trans., xiv, p. 224 (1881).

“ “ “ Ins. Nox. Ag. N. Z., p. 91 (1887).

“ “ Ckll., Journ. Inst. Jam., i, p. 79 (1892).

Asterolecanium “ “ Check List, p. 327 (1896).

Habitat.—New Zealand.

On *Leucopogon Frazeri*; *Leptospermum scoparium*.

175. Asterolecanium epidendri (Bouché).

Lecanium epidendri Bouché, Stett. Ent. Zeit., v, p. 300 (1844).

Planchonia oncidii Ckll., Journ. Inst. Jam., i, p. 78 (1892).

Asterolecanium aureum Targ., Bull. Soc. Ent. Ital., xxiv, pp. 304, 311 (1892).

Planchonia oncidii Ckll., Science Gossip, xxix, p. 78 (1893).

“ “ “ Gard. Chron., (3), xiii, p. 548 (1893).

“ “ “ Bull. Bot. Dep. Jam., p. 8 (1896).

Asterolecanium epidendri Ckll., Pr. Ac. N. Sci. Ph., p. 269 (1899).

Habitat.—Europe; Jamaica; Trinidad.

On *Epidendrum*; *Oncidium tetrapetalum*; *Angræcum sesquipedalis*; *Broughtonia sanguinea*.

176. Asterolecanium fimbriatum (Fonsc.).

Coccus fimbriatus Fonsc., Ann. Soc. Ent. Fr., iii, p. 209 (1834).

“ “ Sign., “ “ “ “ (4), viii, p. 515 (1868).

“ “ Kalt., Die Pflanz., p. 136 (1874).

Planchonia fimbriata Sign., Ann. Soc. Ent. Fr., (4), x, p. 283 (1870).

“ “ McIntire, Jn. Quekett Micr. Club, p. 25 (1889).

“ “ Ckll., Jn. Inst. Jam., i, p. 77 (1892).

“ “ Mask., N. Z. Trans., xxvi, p. 85 (1893).

“ “ “ “ “ “ xxvii, p. 61 (1894).

Asterolecanium fimbriatum Ckll., Check List, p. 327 (1896).

Habitat.—Europe; Australia; Br. Guiana.

On *Leptospermum flavescens*; *Coronilla glauca*.

177. *Asterolecanium grandis* (Newst.).

Pollinia grandis Newst., Ent. Mon. Mag., xxx, p. 182 (1894).

Asterolecanium grande Ckll., Check List, p. 328 (1896).

Habitat.—India.

On "A grass-like plant."

178. *Asterolecanium hakeæ* (Full.).

Planchonia hakeæ Full., Notes on Cocc. W. Austr., p. 7 (1897).

Asterolecanium " " Tr. Ent. Soc. Lond., p. 456 (1899).

Habitat.—W. Australia.

On *Hakea ilicifolia*: *Acacia*.

179. *Asterolecanium hederæ* (Licht.).

Planchonia hederæ Licht., Bull. Soc. Ent. Fr., (5), x, p. xlv (1880).

" " " " " " " " (6), ii, p. lxxv (1882).

" *valloti* " " " " " " " " p. lxxv (1882).

" *hederæ* Ckll., Journ. Inst. Jam., i, p. 79 (1892).

Asterolecanium massalongianum Targ., Bull. Soc. Ent. Ital., xxiv, pp. 295, 312 (1892).

Asterolecanium hederæ Ckll., Ent. News, v, p. 211 (1894).

Habitat.—France: Italy.

On ivy (*Hedera helix*).

180. *Asterolecanium ilicicola* (Targ.).

Aonidia ilicicola Targ., Annali di Agr., p. 423 (1888).

" " " Bull. Soc. Ent. Ital., xxiv, p. 422 (1892).

Asterolecanium ilicicola Targ., Bull. Soc. Ent. Ital., xxv, pp. 286, 311 (1893).

" " Berl. e Leon., Cherm. Ital., Fasc. ii, No. 47 (1897).

Habitat.—Italy.

On *Quercus ilex*.

181. *Asterolecanium ilicis* (Newst.).

Planchonia ilicis Newst., Tr. Ent. Soc. Lond., p. 100 (1897).

Asterolecanium ilicis Ckll., Check List, Suppl., p. 393 (1899).

Habitat.—Algeria.

On "Scrub."

182. *Asterolecanium miliaris* Bdv.

Asterolecanium miliaris Bdv., Insectol. Agricole (1869).

" " Sign., Ann. Soc. Ent. Fr., (4), x, p. 281 (1870).

" " Ckll., Journ. Inst. Jam., i, p. 77 (1892).

" " " " " " i, p. 382 (1893).

" " Mask., The Entom., xxvii, p. 94 (1894).

" " deCharm., Pr. Soc. Amic. Scien., p. 42 (1899).

" " Hemp., Rev. Mus. Paul., iv, p. 409 (1900).

Habitat.—Algeria; Mauritius; Brazil; Jamaica; Trinidad.

On bamboo.

Asterolecanium miliaris longum (Green).

Planchonia miliaris var. longa Green, Ind. Mus. Notes, iv, p. 5 (1896).

Asterolecanium " " longum Ckll., Check List, p. 328 (1896).

Habitat.—Ceylon.

On bamboo.

183. Asterolecanium palmæ Ckll.

Asterolecanium palmæ Ckll., Journ. Inst. Jam., i, p. 76 (1892).

" " " Science Gossip, xxix, p. 77 (1893).

" " " Bull. Bot. Dep. Jam., p. 9 (1896).

Habitat.—Jamaica.

On Cocoanut-palm.

184. Asterolecanium petrophilæ (Full.).

Planchonia petrophilæ Full., Notes on Cocc. W. Austr., p. 7 (1897).

Asterolecanium " " Tr. Ent. Soc. Lond., p. 456 (1899).

Habitat.—W. Australia.

On Petrophila linearis.

185. Asterolecanium pustulans (Ckll.).

Asterodiaspis pustulans Ckll., Journ. Inst. Jam., i, p. 143 (1892).

Planchonia " " Science Gossip, xxix, p. 77 (1893).

Asterolecanium " " Bull. Bot. Dep. Jam., p. 8 (1893).

" " " Can. Ent., xxvii, p. 259 (1895).

" " " Jn. Trin. Nat. Club, ii, p. 306 (1896).

" " " Quaint., Psyche, viii, p. 91 (1897).

" " " Rolfs & Quaint., Cocc. Amer., Dec. i-ii, No. 5 (1898).

" " " Hemp., Rev. Mus. Paul., iv, p. 409 (1900).

" " " Lefroy, Scale Ins. Less. Antil., p. 38 (1901).

Habitat.—Jamaica; Porto Rico; Antigua; Brazil; Br. Guiana; Grenada; Montserrat; Mexico; Florida.

On fig; oleander; mango; peach; custard-apple; Anona reticulata; pigeon-peas; mulberry; Hibiscus.

186. Asterolecanium quercicola (Bouché).

Lecanium quercicola Bouché, Stett. Ent. Zeit., xii, p. 112 (1851).

Asterolecanium " Sign., Ann. Soc. Ent. Fr., (4), x, p. 279 (1870).

Asterodiaspis " " " " " (5), vi, p. 606 (1876).

" " " Bull. " " " " " p. ccix (1876).

" " " Comst., Rep. U. S. Dep. Ag., 1880, p. 330 (1881).

" " " Dougl., Ent. Mon. Mag., xxii, p. 250 (1886).

" " " Pack., 5th Rep. U. S. Ent. Com., p. 102 (1890).

Planchonia " Ckll., Journ. Inst. Jam., i, p. 79 (1892).

Asterodiaspis " Rübs., Berl. Ent. Zeit., xxxix, p. 200 (1894).

Asterolecanium " Mask., The Entom., xxvii, p. 95 (1894).

Asterodiaspis " Sturgis, Rep. Conn. Exp. Sta., p. 193 (1895).

" " " Newst., Ent. Mon. Mag., xxxi, p. 85 (1895).

Asterolecanium " Saccardo, Riv. Pat. Veg., iv, p. 49 (1895).

Planchonia (*Asterolecanium*) *quercicola* Craw, 5th Bien. Rep. Cal. Bd. Hort., p. 43 (1896).

Planchonia quercicola Mask., N. Z. Trans., xxviii, p. 396 (1896).

Asterodiaspis " Newst., Ind. Mus. Notes, iv, No. 2, pp. 81, 82 (1897).

" " Lowe, Bull. 136, N. Y. Exp. Sta., p. 586 (1897).

Planchonia (*Asterolecanium*) *quercicola* Frog., Dep. Ag. N. S. W., No. 175, p. 6 (1897).

Asterodiaspis quercicola Marl., Bull. 20, n. s., Dep. Ag., p. 75 (1899).

Asterolecanium " de Charm., Pr. Soc. Amic. Scien., p. 42 (1899).

" " King, Can. Ent., xxxi, p. 112 (1899).

Asterodiaspis " Newst., Jn. Roy. Hor. Soc., xxiii, p. 20 (1900).

Habitat.—Europe; Australia; Mauritius; Jamaica; Conn.; N. Y.; D. C.; Mass.

On oak.

187. *Asterolecanium solenophoroides* (Green).

Planchonia solenophoroides Green, Ind. Mus. Notes, iv, No. 1, p. 6 (1896).

Asterolecanium " Ckll., Check List, p. 328 (1896).

Habitat.—Ceylon.

On *Arundinaria*.

188. *Asterolecanium stypheliæ* (Mask.).

Planchonia stypheliæ Mask., N. Z. Trans., xxiv, p. 24 (1891).

" " Ckll., Journ. Inst. Jam., i, p. 79 (1892).

" *fimbriata* var. *stypheliæ* Mask., N. Z. Trans., xxvi, p. 85 (1893).

" *stypheliæ* " " " xxvii, p. 62 (1894).

Asterolecanium stypheliæ Full., Tr. Ent. Soc. Lond., p. 457 (1899).

Habitat.—Australia; N. Tasmania.

On *Styphelia richiei*; *Leptospermum juniperinum*.

189. *Asterolecanium thesii* (Dougl.).

Pollinia thesii Dougl., Ent. Mon. Mag., xxix, p. 55 (1893).

Asterolecanium thesii Ckll., Check List, p. 328 (1896).

Habitat.—Great Britain.

190. *Asterolecanium townsendi* Ckll.

Asterolecanium Townsendi Ckll., Ann. Mag. N. H., (7), x, p. 468 (1902).

Habitat.—Mexico.

On "Guasima."

191. *Asterolecanium urichi* Ckll.

Asterolecanium urichi Ckll., Jn. Trin. Nat. Club, i, p. 308 (1894).

" " " Bull. Bot. Dep. Jam., p. 9 (1895).

Habitat.—Trinidad; Grenada.

On palms; *Bactris minor*.

192. *Asterolecanium variolosum* (Ratz.).

Coccus variolosus Ratz., Tharander Jahrbuch, p. 187 (1870).

- Asterolecanium variolosum japonicum* Ckll.

- 193.
- Asterolecanium ventruosum*
- (Mask.).

- 194.
- Asterolecanium viridulum*
- Ckll.

- Genus **LECANIODIASPIS** Targ. Type, sardoa.

195. *Lecanodiaspis acaciæ* (Mask.).

- 196.
- Lecaniodiaspis atherospermæ*
- (Mask.).

- 197.
- Lecaniodiaspis celtidis*
- Ckll.

- Lecaniodiaspis* (*Prosopophora*) *celtidis* Ckll., *Psyche*, vii, Supl., i. p. 19 (1896).
 " " " " *The Entom.*, xxx, p. 12 (1897).
 Habitat.—Texas; Ohio.
 On *Celtis occidentalis*.

198. *Lecaniodiaspis dendrobii* (Dougl.).

Prosopophora dendrobii Dougl., Ent. Mon. Mag., xxviii, p. 207 (1892).

“ “ Newst., “ “ “ xxix, p. 78 (1893).

“ “ Ckll., Gard. Chron., (3), xiii, p. 548 (1893).

“ “ Dougl., Ent. Mon. Mag., xxx, p. 30 (1894).

Lecaniodiaspis “ Ckll., Check List, p. 327 (1896).

“ (*Prosopophora*) *dendrobii* Green, Ent. Mon. Mag., xxxvii, p. 294 (1901).

Habitat.—Br. Guiana.

On *Dendrobium calceolaria*.

199. *Lecaniodiaspis eucalypti* (Mask.).

Prosopophora eucalypti Mask., N. Z. Trans., xxv, p. 226 (1892).

“ “ “ Ent. Mon. Mag., xxix, p. 105 (1893).

Lecaniodiaspis “ Ckll., Check List, p. 327 (1896).

Habitat.—Australia.

On *Eucalyptus*.

200. *Lecaniodiaspis manihotis* (Towns.).

Prosopophora manihotis Towns., Jn. N. Y. Ent. Soc., vi, p. 172 (1898).

Lecaniodiaspis “ Ckll., Check List, Suppl., p. 392 (1899).

Prosopophora “ Ann. Mag. N. H., (7), x, p. 468 (1902).

Habitat.—Mexico.

On *Manihot* (nettle-tree).

201. *Lecaniodiaspis melaleucæ* (Full.).

Prosopophora melaleucæ Full., Notes on Cocc. W. Austr., p. 7 (1897).

Lecaniodiaspis “ “ Tr. Ent. Soc. Lond., p. 455 (1899).

Habitat.—W. Australia.

On *Melaleuca leucadendron*.

202. *Lecaniodiaspis mimosæ* (Mask.).

Prosopophora prosopidis var. *mimosæ* Mask., N.Z.Trans.,xxix,p. 316 (1897).

Lecaniodiaspis mimosæ Ckll., Check List, Suppl., p. 392 (1899).

Habitat.—S. Africa.

On *Mimosa*.

203. *Lecaniodiaspis prosopidis* (Mask.).

Prosopophora prosopidis Mask., N. Z. Trans., xxvii, p. 60 (1894).

Lecaniodiaspis “ Ckll., Check List, p. 327 (1896).

Habitat.—Arizona.

On *Prosopis julifera*.

204. *Lecaniodiaspis pruinosa* Hunter.

Lecaniodiaspis celtidis subsp. *pruinosa* Hunter, Kan. Univ. Quar., viii, p. 77 (1899).

Lecaniodiaspis pruinosa Ckll., in litt. (1902).

Habitat.—Kansas.

On elm.

205. *Lecaniodiaspis quercus* Ckll.

Lecaniodiaspis (*Prosopophora*) *quercus* Ckll., *Psyche*, vii, Suppl., i, p. 19 (1896).

" " " " Bull. 4, T. s., Dep. Ag., p. 51 (1896).

Lecaniodiaspis quercus Kuw., *Pr. Cal. Ac. Sci.*, (3), iii, p. 48 (1902).

Habitat.—Japan.

On *Quercus acuta*; *Quercus sessilifolia*; *Pasarnia glabra*.

206. *Lecaniodiaspis radiata* Ckll.

Lecaniodiaspis (*Prosopophora*) *radiata* Ckll., *Can. Ent.*, xxix, p. 269 (1897).

Habitat.—Mexico.

207. *Lecaniodiaspis rufescens* (Ckll.).

Prosopophora rufescens Ckll., *Science*, xxii, p. 151 (1893).

" *yuccæ* var. *rufescens* Ckll., Bull. 4, T. s., Dep. Ag., p. 50 (1896).

Lecaniodiaspis rufescens Ehrh., *Can. Ent.*, xxxi, p. 104 (1899).

" " Ckll., " " " p. 267 (1899).

Habitat.—California; Arizona.

On *Adenostoma oblongifolia*; *A. fasciculatum*; *Fouquiera splendens*.

208. *Lecaniodiaspis rugosa* Hemp.

Lecaniodiaspis rugosus Hemp., *Rev. Mus. Paul.*, iv, p. 407 (1900).

" " " *Ann. Mag. N. H.*, (7), vii, p. 119 (1901).

Habitat.—Brazil.

209. *Lecaniodiaspis sardoa* Targ.

Lecaniodiaspis sardoa Targ., *Bull. Soc. Ent. Ital.*, i, p. 262 (1869).

" " *Sign., Ann. Soc. Ent. Fr.*, (4), x, p. 285 (1870).

" " Ckll., *Journ. Inst. Jam.*, i, p. 76 (1892).

Habitat.—Europe; Mediterranean region.

On *Ciste salviaefolia*.

210. *Lecaniodiaspis tessellata* Ckll.

Lecaniodiaspis (*Prosopophora*) *tessellatus* Ckll., *Ent. News*, viii, p. 161 (1897).

" " *Quaint. & Scott, Cocc. Amer.*, Dec.

iii-iv, No. 5 (1901).

Habitat.—Ga.; Fla.

On *Disospyros Virginiana*; hickory.

211. *Lecaniodiaspis yuccæ* Towns.

Lecaniodiaspis yuccæ Towns., *Bull. 7, N. Mex. Exp. Sta.*, p. 13 (1892).

" " Ckll., *Journ. Inst. Jam.*, i, p. 76 (1892).

" " *Am. Nat.*, xxix, p. 728 (1895).

" " Bull. 4, T. s., Dep. Ag., p. 50 (1896).

" " *Riley & How., Ins. Life*, v, p. 65 (1896).

Habitat.—N. Mexico.

On *Yucca macrocarpa*; *Dasyllirion wheeleri*; *Parthenium incanum*.

Genus **CEROCOCCUS** Comst. Type, quercus.

Cerococcus Comst., Rep. U. S. Dep. Ag., p. 213 (1882); Ckll. Can. Ent., xxxi, p. 276 (1899).

212. *Cerococcus corticis* Towns. & Ckll.

Cerococcus corticis Towns. & Ckll., Jn. N. Y. Ent. Soc., vi, p. 170 (1898).

" " Patt., Pr. Cal. Ac. Sci., (3), ii, p. 393 (1901).

Habitat.—Mexico.

On *Quercus engelmanni*.

213. *Cerococcus ehrhorni* Ckll.

Cerococcus ehrhorni Ckll., Psyche, vii, p. 255 (1895).

" " Patt., Pr. Cal. Ac. Sci., (3), ii, p. 387 (1901).

Habitat.—California.

On live oak.

214. *Cerococcus ficoides* Green.

Cerococcus ficoides Green, Ent. Mon. Mag., xxxv, p. 225 (1899).

Habitat.—India.

On Tea.

215. *Cerococcus quercus* Comst.

Cerococcus quercus Comst., Rep. U. S. Dep. Ag., p. 213 (1882).

" " Howard, Bull. 9, n. s., Dep. Ag., p. 39 (1897).

" " Patt., Pr. Cal. Ac. Sci., (3), ii, p. 389 (1901).

Habitat.—Arizona; California.

On Oak.

Genus **ANOMALOCOCCUS** Green. Type, *cremastogastri*.

Anomalococcus Green, Ent. Mon. Mag., xxxviii, p. 260 (1902).

216. *Anomalococcus cremastogastri* Green.

Anomalococcus cremastogastri Green, Ent. Mon. Mag., xxxviii, p. 261 (1902).

Habitat.—Ceylon.

In nests of *Cremastogaster Dohrni*, on *Ficus*.

Genus **AMORPHOCOCUS** Green. Type, *mesuæ*.

Amorphococcus Green, Ent. Mon. Mag., xxxviii, p. 261 (1902).

217. *Amorphococcus mesuæ* Green.

Amorphococcus mesuæ Green, Ent. Mon. Mag., xxxviii, p. 261 (1902).

Habitat.—Ceylon.

On terminal twigs of Ironwood tree (*Mesua ferrea*).

Genus **ANTECEROCOCCUS** Green. Type, *punctiferus*.

Antecrococcus Green, Pr. Linn. Soc. N. S. W., p. 560 (1900).

218. Antecerooccus bryoides (Mask.).

Planchonia bryoides Mask., N. Z. Trans., xxvi, p. 84 (1893).

Asterolecanium " Ckll., Check List, p. 328 (1896).

Antecerooccus " Green, in litt. to Prof. Cockerell (1902).

Habitat.—Fiji; Australia.

On Exocarpus.

Antecerooccus bryoides stellatus (Mask.).

Planchonia bryoides var. stellata Mask., N. Z. Trans., xxix, p. 315 (1897).

Asterolecanium " " stellatum Ckll., Check List, Suppl., p. 393 (1899).

Habitat.—Australia.

On Exocarpus cupressiformis.

219. Antecerooccus punctiferus Green.

Antecerooccus punctiferus Green, Pr. Linn. Soc. N. S. W., p. 560 (1900).

Habitat.—N. S. Wales.

On Pittospermum eugenioides.

Genus **SOLENOCOCCUS** Ckll. Type, fagi.

||Solenophora Mask., N. Z. Trans., xxii, p. 139 (1889).

Solenococcus Ckll., Check List, Suppl., p. 392, note (1899); Can. Ent., xxxi, p. 276 (1899).

220. Solenococcus artemisiæ (Ckll.).

Lecaniodiaspis artemisiæ Ckll., Ann. Mag. N. H., (6), xx, p. 514 (1897).

Solenococcus " " in litt. (1902).

Habitat.—New Mexico.

On sage bush.

221. Solenococcus baccharidis Hemp.

Solenococcus baccharidis Hemp., Rev. Mus. Paul., iv, p. 392 (1900).

" " " Ann. Mag. N. H., (7), vii, p. 112 (1901).

Habitat.—Brazil.

On Baccharis dracunculifolia.

222. Solenococcus coloradensis (Ckll.).

Solenophora coloradensis Ckll., Psyche, viii, p. 262 (1898).

Solenococcus " " Check List, Suppl., p. 392 (1899).

Habitat.—Colorado.

On Atriplex canescens.

223. Solenococcus corokiæ (Mask.).

Solenophora corokiæ Mask., N. Z. Trans., xxii, p. 141 (1889).

" " " " " xxiii, p. 139 (1890).

Habitat.—New Zealand.

On Corokia cotoneaster.

224. *Solenococcus fagi* (Mask.).

Solenophora fagi Mask., N. Z. Trans., xxii, p. 139 (1889).

Habitat.—New Zealand.

On *Fagus*.

225. *Solenococcus koebeleii* (Ckll.).

Solenophora koebeleii Ckll., Ann. Mag. N. H., (7), i, p. 429 (1898).

“ “ “ Check List, Suppl., p. 392 (1899).

Habitat.—Mexico.

On *Cratægus*, *Prunus demissa*.

226. *Solenococcus parrotti* (Hunter).

Lecaniodiaspis parrotti Hunter, Kan. Univ. Quar., viii, p. 76 (1899).

Solenococcus “ Ckll., in litt. (1901).

Habitat.—Kansas.

On *Æsculus glabra*.

227. *Solenococcus tuberculus* Hemp.

Solenococcus tuberculus Hemp., Rev. Mus. Paul., iv, p. 390 (1900).

“ “ “ Ann. Mag. N. H., (7), vii, p. 111 (1901).

Habitat.—Brazil.

On *Baccharis*.

228. *Solenococcus zapotlana* (Ckll.).

Solenophora zapotlana Ckll., Ann. Mag. N. H., (7), xi, p. 164 (1903).

Habitat.—Mexico.

On sage.

Genus **BIRCHIPPIA** Green. Type, *anomala*.

Birchippia Green, Ann. Mag. N. H., (7), vi, p. 450 (1900).

229. *Birchippia anomala* Green.

Birchippia anomala Green, Ann. Mag. N. H., (7), vi, p. 451 (1900).

Lecaniodiaspis “ “ Ent. Mon. Mag., xxxvii, p. 294 (1901).

Habitat.—Victoria, Australia.

On “a Leguminous plant.”

Genus **POLLINIA** Targ. Type, *costæ* = *pollini*.

Pollinia Targ., Bull. Soc. Ent. Ital., i, p. 263 (1869); Catalogue, p. 41 (1869):

Sign., Ann. Soc. Ent. Fr., (5), x, p. 274 (1870): Dougl., Ent. Mon. Mag.,
xxix, p. 55 (1893): Ckll., Can. Ent., xxxi, p. 276 (1899).

Cisticoccus A. Costa.

230. *Pollinia ovoides* Ckll.

Pollinia ovoides Ckll., The Entom., xxxiv, p. 225 (1901).

Habitat.—Natal.

231. *Pollinia pollini* (Costa).

Coccus pollini Costa, Atti del. R. Ist. d'Incorrag., iv, p. 202 (1828).

Pollinia costæ Targ., Bull. Soc. Ent. Ital., i, p. 264 (1869).

" " " Catalogue, p. 41 (1869).

" " Sign., Ann. Soc. Ent. Fr., (4), x, p. 275 (1870).

" " " " " " " (5), vi, p. 607 (1876).

" *pollini* Ckll., Journ. Inst. Jam., i, p. 76 (1892).

" " Dougl., Ent. Mon. Mag., xxix, p. 55 (1893).

" *costæ* " " " " " p. 55 (1893).

" " Craw, 4th Bien. Rep. Cal. Bd. Hort., p. 438 (1894).

" " " 5th " " " " " p. 43 (1896).

" *pollini* Leon., Lab. di Ent., Portici, p. 4 (1899).

Habitat.—Italy; California.

On olive.

Genus **KERMES** Boitard. Type, *variegatus*.

Kermes Boitard, Manual d'Entomologie, p. 171 (1828); Targ., Catalogue,

p. 40 (1869); Sign., Ann. Soc. Ent. Fr., (5), iv, p. 547 (1874); Comst.,

Rep. U. S. Dep. Ag., 1880, p. 337 (1881); Ckll., Can. Ent., xxxi, p. 276 (1899).

Chermes Amy & Serv., Hist. Nat. Ins., Hem., p. 630 (1843).

232. *Kermes acaciæ* Mask.

Kermes acaciæ Mask., N. Z. Trans., xxvi, p. 83 (1893).

" " " The Entom., xxvii, p. 93 (1894).

Habitat.—Australia.

On Acacia.

233. *Kermes andrei* King.

Kermes andrei King, Psyche, ix, pp. 22, 78, 81 (1900).

" " " Can. Ent., xxxiv, p. 160 (1902).

Habitat.—Mass.; Ga.; Ohio.

On oak.

234. *Kermes arizonensis* King.

Kermes arizonensis King, Ent. News, xiv, p. 21 (1903).

Habitat.—Arizona.

On oak.

235. *Kermes austini* Ehrh.

Kermes austini Ehrh., Can. Ent., xxxi, p. 104 (1899).

" " Ckll., Psyche, ix, p. 44 (1900).

" " King, " " p. 81 (1900).

Habitat.—California.

On *Quercus oblongifolius*.

236. *Kermes ballotæ* Sign.

Kermes ballotæ Sign., Ann. Soc. Ent. Fr., (5), iv, p. 548 (1874).

Habitat.—Europe.

On *Quercus ballota*.

237. *Kermes boguei* Ckll.

Kermes boguei Ckll., Ent. News, viii, p. 94 (1897).

“ “ “ Psyche, ix, p. 44 (1900).

“ “ King, “ “ p. 79 (1900).

Habitat.—Oklahoma.

On *Quercus alba*.

238. *Kermes ceriferus* Ehrh.

Kermes ceriferus Ehrh., Can. Ent., xxxi, p. 5 (1899).

“ “ Ckll., Psyche, ix, p. 44 (1900).

“ “ King, “ “ p. 81 (1900).

Habitat.—Arizona.

On oak.

239. *Kermes cockerelli* Ehrh.

Kermes cockerelli Ehrh., Ent. News, ix, p. 185 (1898).

“ “ Ckll., Psyche, ix, p. 44 (1900).

“ “ King, “ “ p. 80 (1900).

Habitat.—California.

On *Quercus lobata*.

240. *Kermes concinnulus* Ckll.

Kermes concinnulus Ckll., Can. Ent., xxx, p. 172 (1898).

“ “ “ Psyche, ix, p. 44 (1900).

“ “ King, “ “ p. 80 (1900).

Habitat.—Kansas.

On oak.

241. *Kermes fuscus* (Sign.).

Lecanium fuscus Sign., Ann. Soc. Ent. Fr., (5), iii, p. 420 (1873).

Kermes “ Ckll., Check List, p. 327 (1896).

Habitat.—Austria.

On oak.

242. *Kermes galliformis* Riley.

Kermes galliformis Riley, Am. Nat., xv, p. 482 (1881).

“ “ Comst., Rep. U. S. Dep. Ag., 1880, p. 337 (1881).

“ “ “ 2nd Rep. Dep. Ent. Corn. Univ., p. 132 (1883).

“ “ Pack., 5th Rep. U. S. Ent. Com., p. 100 (1890).

“ “ Mask., N. Z. Trans., xxiv, p. 21 (1891).

“ “ Lint., 12th Rep. Ins. N. Y., p. 316 (1897).

“ “ Osborn, Contr. Ia. Ag. Coll., No. 3, p. 3 (1898).

Kermes galliformis King, Can. Ent. xxxi, p. 139 (1899).

" " Ckll., Psyche, ix, p. 44 (1900).

" " King, " " p. 79 (1900).

Habitat.—Mass.; Conn.; N. Y.; N. J.; D. C.; Fla.: Ala.; La.: Ohio; Ia.: Mo.; N. Mex.; Cal.

On oak.

***Kermes galliformis cueroensis* Ckll.**

Kermes galliformis var. *cueroensis* Ckll., Psyche, ix, p. 79 (1900).

Habitat.—Texas.

On oak.

243. *Kermes gibbosus* Sign.

Kermes gibbosus Sign., Ann. Soc. Ent. Fr., (5), iv, p. 552 (1874).

Habitat.—Austria.

On oak.

244. *Kermes gillettei* Ckll.

Kermes gillettei Ckll., The Entom., xxviii, p. 101 (1895).

" " Gillette & Baker, Bull. 31, Col. Exp. Sta., p. 126 (1895).

" " Ckll., The Entom., xxx, p. 14 (1897).

" " " Psyche, ix, p. 44 (1900).

" " King, " " p. 78 (1900).

Habitat.—Colorado; New Mexico.

On *Quercus undulata*.

245. *Kermes grandis* Ckll.

Kermes grandis Ckll., Ann. Mag. N. H., (7), i, p. 431 (1898).

" " Psyche, ix, p. 44 (1900).

" " King, " " p. 80 (1900).

Habitat.—Mexico.

On *Quercus engelmanni*.

246. *Kermes ilicis* (Linn.).

— — Reaum., Mem. Ins., iv, p. 45, pl. v, fig. 1 (1738).

Coccus ilicis Linn., Syst. Nat., Ed. x, i, p. 455 (1758).

" " Lederm., Mikrosk., p. 72 (1764).

" " Linn., Syst. Nat., Ed. xii, i, p. 740 (1766).

" " Cassals, Dissert. *Kermes* (1768).

" " Fab., Syst. Ent., p. 743 (1775).

" " Mod., Act. Goth., i, p. 24 (1778).

" " Fab., Spec. Ins., ii, p. 393 (1781).

" " Mant. Ins., ii, p. 318 (1787).

" " Gmel., Syst. Nat., Ed. xiii, p. 2216 (1789).

Chermes " Oliv., Ency. Meth., vii, p. 440 (1792).

Coccus " Fab., Ent. Syst., iv, p. 225 (1794).

" " Turton, Syst. Nat., ii, p. 712 (1801).

" " Fab., Syst. Rhyng., p. 308 (1803).

Coccus ilicis Truchet, *Traité complet de Kermes* (1811).

" " Kirby & Spence, *Intr. Ent.*, 5th Ed., p. 319 (1828).

" " Ratz., *Mediz. Zool.*, ii, p. 223 (1833).

" " Fonsc., *Ann. Soc. Ent. Fr.*, iii, p. 210 (1834).

" " Burm., *Handb. Ent.*, ii, p. 71 (1835).

Lecanium ilicis Blanch., *Hist. Nat. Ins.*, p. 214 (1840).

Coccus " Westw., *Intr. Ent.*, ii, p. 447 (1840).

" " Amy. & Serv., *Suites de Buffon, Hem.*, p. 633 (1843).

" " Amyot, *Monom.*, No. 550 (1848).

" " Landerer, *Journ. de Pharm.*, xi, (1852).

Chermes bauhini Planch., *Le Chermes du Chêne*, p. 2 (1864).

Coccus " Targ., *Studii sul. Coccin.*, p. 45 (1867).

Kermes " " *Catalogue*, p. 40 (1869).

Lecanium bauhinii Licht., *Bull. Soc. Ent. Fr.*, (4), x, p. xxxvii (1870).

Kermes " Sign., *Ann.* " " " (5), iv, pp. 88, 549 (1874).

Lecanium ilicis Kalt., *Die Pflanz.*, p. 676 (1874).

Kermes bauhinii Sign., *Ann. Soc. Ent. Fr.*, (5), v, p. 18 (1875).

Lecanium ilicis Eckst., *Forst. Zool.*, p. 559 (1897).

Kermes " Ckll., *Pr. Ac. N. Sci. Ph.*, p. 270 (1899).

Habitat.—Europe.

On oak.

247. *Kermes kingii* Ckll.

Kermes kingii Ckll., *Ann. Mag. N. H.*, (7), ii, p. 330 (1898).

" " " *Can. Ent.*, xxxi, p. 139 (1899).

" " " *Psyche*, ix, p. 44 (1900).

" " King, " " pp. 80, 83 (1900).

Habitat.—Mass.; Del.

On red oak.

248. *Kermes nakagawæ* Kuwana.

Kermes nakagawæ Kuw., *Pr. Cal. Ac. Sci.*, (3), iii, p. 49 (1902).

Habitat.—Japan.

On *Quercus serrata*; *Q. glandulifera*.

249. *Kermes nawæ* Kuwana.

Kermes nawæ Kuw., *Pr. Cal. Ac. Sci.*, (3), iii, p. 49 (1902).

Habitat.—Japan.

On *Quercus glandulifera*; *Rhamnus japonica genuina*.

250. *Kermes nigropunctatus* Ehrh. & Ckll.

Kermes nigropunctatus Ehrh. & Ckll., *Ent. News*, ix, p. 186 (1898).

" " Ckll., *Biol. Centr. Amer.*, ii, pt. 2, p. 10 (1899).

" " " *Psyche*, ix, p. 45 (1900).

" " King, " " p. 80 (1900).

Habitat.—Cal.; Mex.

On oak.

251. *Kermes nivalis* King & Ckll.

Kermes nivalis King & Ckll., Ann. Mag. N. H., (7), ii, p. 330 (1898).

" " Ckll., Can. Ent., xxxi, p. 139 (1899).

" " " Psyche, ix, p. 44 (1900).

" " King, " " pp. 78, 80 (1900).

" " Hunter, Studies Ins. Life, p. 187 (1902).

Habitat.—Mass.

On *Quercus alba*.

252. *Kermes pallidus* Sign.

Kermes pallidus Sign., Ann. Soc. Ent. Fr., (5), iv, p. 553 (1874).

Habitat.—Europe.

On oak.

253. *Kermes perryi* King.

Kermes perryi King, Psyche, ix, p. 81 (1900).

" " " Can. Ent., xxxiv, p. 60 (1902).

Habitat.—Mass.

On oak.

254. *Kermes pettiti* Ehrh.

Kermes pettiti Ehrh., Can. Ent., xxxi, p. 7 (1899).

" " Ckll., Psyche, ix, p. 45 (1900).

" " King, " " p. 81 (1900).

" " " Can. Ent., xxxiii, p. 193 (1901).

" " " " " xxxiv, p. 59 (1902).

Habitat.—Can.; Mass.; N. Y.

On oak.

255. *Kermes pubescens* Bogue.

Kermes pubescens Bogue, Can. Ent., xxx, p. 172 (1898).

" " King, " " xxxi, p. 139 (1899).

" " Ckll., Psyche, ix, p. 44 (1900).

" " King, " " pp. 80, 83 (1900).

" " Hunter, Studies Ins. Life, p. 188 (1902).

Habitat.—Mass.; Kans.; Ohio.

On oak.

256. *Kermes quercus* (Linn.).

— — Reaum., Mem. Ins., iv, pl. 6, figs. 1-4 (1738).

Coccus quercus Linn., Syst. Nat., Ed. x, i, p. 455 (1758).

" " " Faun. Suec., p. 265 (1761).

Chermes " *reniformis* Geoff., Abr. Ins., p. 508 (1762).

" *reniformis* Fourc., Ent. Paris, i, p. 230 (1785).

Coccus quercus Fab., Mant. Ins., ii, p. 318 (1787).

" " Gmel., Syst. Nat., Ed. xiii, p. 2216 (1789).

Chermes reniformis Oliv., Ency. Meth., vii, p. 441 (1792).

- Coccus quercus* Fab., Ent. Syst., iv, p. 225 (1794).
 " " " Syst. Rhyng., p. 307 (1803).
 " " Bechst., Forstins., pt. i, p. 284 (1804).
 " dryoceris Amy., Monom., No. 552 (1848).
Physokermes reniformis Targ., Catalogue, p. 41 (1869).
 ?*Lecanium quercus* Sign., Ann. Soc. Ent. Fr., (5), iii, p. 427 (1873).
Kermes reniformis " " " " " iv, pp. 89, 553 (1874).
 ?*Lecanium quercus* Comst., 2nd Rep. Dep. Ent. Corn. Univ., p. 135 (1883).
 ? " " Ckll., Can. Ent., xxvii, p. 35 (1895).
 " " Henschel, Schäd. Forst. & Obst. Ins., p. 513 (1895).
Kermes " Ckll., Pr. Ac. N. Sci. Ph., p. 270 (1899).
 " " King, Psyche, ix, p. 259 (1901).
 Habitat.—Europe; U. S.
 On oak.

257. *Kermes roboris* (Fourt.).

- — — Reaum., Mem. Ins., iv, pl. 5, figs. 3, 4 (1738).
Chermes quercus rotundus, etc., Geoff., Abr. Ins., p. 508 (1762).
 " *roboris* Fourc., Ent. Paris, p. 228 (1785).
Coccus variegatus Gmel., Syst. Nat., Ed. xiii, p. 2221 (1789).
 " " DeVillers, " " p. 559 (1789).
Chermes " Oliv., Ency. Meth., vii, p. 440 (1792).
Coccus " Turton, Syst. Nat., p. 715 (1801).
 " " Bechst., Forstins., i, p. 288 (1804).
 " " Fonsc., Ann. Soc. Ent. Fr., iii, p. 210 (1834).
Lecanium quercus Burm., Handb. Ent., ii, p. 71 (1835).
Chermes variegatus Amy. & Serv., Hist. Nat. Ins., p. 635 (1843).
Lecanium quercus Bouché, Stett. Ent. Zeit., xii, p. 112 (1851).
Kermes variegatus Targ., Catalogue, p. 40 (1869).
 " " Sign., Ann. Soc. Ent. Fr., (5), iv, pp. 89, 554 (1874).
 " " Newst., Ent. Mon. Mag., xxxiii, p. 267 (1897).
 Habitat.—Europe.
 On oak.

258. *Kermes trinotatus* Bogue.

- Kermes trinotatus* Bogue, Can. Ent., xxxii, p. 205 (1900).
 " " Quaint. & Scott, Cocc. Amer., Dec. iii-iv, No. 4 (1901).
 Habitat.—N. Y.; N. J.; Ga.; Ohio; Oklahoma.
 On *Quercus nigra*.

259. *Kermes vermilio* Planch.

- Kermes vermilio* Planch., LeKermes du Chêne, p. 19 (1864).
 " " Targ., Catalogue, p. 40 (1869).
 " " Sign., Ann. Soc. Ent. Fr., (5), iv, pp. 89, 549, 555 (1874).
 " " Blanch., Les Coccides utiles, p. 54 (1883).
 " " Ckll., Pr. Ac. N. Sci. Ph., p. 270 (1899).
 Habitat.—Italy; Spain.
 On *Quercus coccifera*.

Genus **NIDULARIA** Targ. Type, pulvinata.

Nidularia Targ., Catalogue, p. 34 (1869): Sign., Ann. Soc. Ent. Fr., (5), v, p. 17 (1875): Ckll., Can. Ent., xxxi, p. 276 (1899).

260. *Nidularia pulvinata* (Planch.).

Coccus pulvinatus Planch., Le Chermes du Chêne, p. 25 (1864).

Nidularia pulvinatus Sign., Ann. Soc. Ent. Fr., (5), v, p. 17 (1875).

Habitat.—Europe.

Genus **RHIZOCOCCUS** Sign. Type, gnidii.

Rhizococcus Sign., Ann. Soc. Ent. Fr., (5), v, p. 36 (1875): Comst., Rep. U. S. Dep. Ag., 1880, p. 339 (1881): Mask., Ins. Nox. Agr. N. Z., p. 96 (1887): Ckll., Can. Ent., xxxi, p. 276 (1899).

261. *Rhizococcus casuarinæ* Mask.

Rhizococcus casuarinæ Mask., N. Z. Trans., xxv, p. 230 (1892).

“ “ “ The Entom., xxvii, p. 46 (1894).

Habitat.—Australia.

On *Casuarina suberosa*.

***Rhizococcus casuarinæ mancus* Mask.**

Rhizococcus casuarinæ var. *mancus* Mask., N. Z. Trans., xxix, p. 316 (1897).

Habitat.—Australia.

On *Casuarina distyla*.

262. *Rhizococcus celmisiae* Mask.

Rhizococcus celmisiae Mask., N. Z. Trans., xvi, p. 135 (1883).

“ “ “ Ins. Nox. Agr. N. Z., p. 96 (1887).

Habitat.—N. Zealand.

On *Celmisia*.

263. *Rhizococcus fossor* Mask.

Rhizococcus fossor Mask., N. Z. Trans., xvi, p. 136 (1883).

“ “ “ “ “ xix, p. 42 (1886).

“ “ “ Ins. Nox. Agr. N. Z., p. 97 (1887).

“ “ “ Ent. Mon. Mag., xxvi, p. 278 (1890).

Habitat.—N. Zealand.

On *Santalum cunninghamii*.

264. *Rhizococcus gnidii* Sign.

Rhizococcus gnidii Sign., Ann. Soc. Ent. Fr., (5), v, p. 37 (1875).

Habitat.—France.

On Roots of *Daphne gnidium*.

265. *Rhizococcus grandis* Mask.

Rhizococcus grandis Mask., N. Z. Trans., xxiv, p. 29 (1891).

“ “ Lidg., The Wombat, iii, p. 87 (1898).

Habitat.—Australia.

On *Acacia longifolia*.

274. Rhizococcus viridis Green.

Rhizococcus viridis Green, Pr. Linn. Soc. N. S. W., p. 559 (1900).

" " Frog., Ag. Gaz. N. S. W., p. 20 (1902).

Habitat.—N. S. Wales.

On Acacia decurrens (wattle).

Genus **GOSSYPARIA** Sign. Type, spuria.

Gossyparia Sign., Ann. Soc. Ent. Fr., (5), v, p. 20 (1875): Ckll., Can. Ent., xxxi, p. 276 (1899).

275. Gossyparia casuarinæ Mask.

Gossyparia casuarinæ Mask., N. Z. Trans., xxv, p. 227 (1892).

Habitat.—Australia.

On Casuarina.

276. Gossyparia cavellei Mask.

Gossyparia cavellei Mask., N. Z. Trans., xxii, p. 147 (1889).

Habitat.—N. Zealand.

On Fagus menziesii.

277. Gossyparia confluens Mask.

Gossyparia confluens Mask., N. Z. Trans., xxv, p. 227 (1892).

Habitat.—Australia.

On Eucalyptus.

278. Gossyparia mannifera (Hardw.).

Chermes mannifer Hardw., Asiatic Researches, xiv, pp. 182-186 (1822).

Coccus manniparus Ehrenb., Symb. Phys., Dec. i, tab. 10 (1829).

" " Burm., Handb. Ent., ii, p. 74 (1835).

" " Chav., Ann. Soc. Ent. Fr., (2), vi, p. 144 (1848).

Gossyparia " Sign., " " " " (5), v, p. 24 (1875).

" " Blanch., Les Coccides utiles, pp. 65, 111 (1883).

" mannipara Uhler, St. Nat. Hist., ii, p. 218 (1884).

Gossyparia mannifera Giard, Bull. Soc. Ent. Fr., (6), ii, p. cclxxiii (1892).

" " Riley & How., Ins. Life, v, p. 286 (1893).

Coccus manniparus Theobald, Ins. Life, (London), p. 185 (1896).

" " Eckst., Forst. Zool., p. 557 (1897).

" " Teesdale, Science Gossip, n. s., iii, p. 229 (1897).

Habitat.—Algeria; Egypt; Asia Minor; Arabia; Russia.

On Tamarix mannifera.

279. Gossyparia spuria (Modeer).

— — Reaum., Mem. Ins., iv, p. 82, pl. 7, figs. 1-10 (1734).

||Coccus ulmi Linn., Faun Suec., p. 265 (1761) [non Linn., Syst. Nat., x, 1758].

" " Geoff., Hist. Abr. Ins., i, p. 512 (1762).

" " Linn., Syst. Nat., Ed. xii, i, p. 740 (1766).

- Coccus ulmi* Fab., Syst. Ent., p. 743 (1775).
 " *spurius* Mod., Act. Goth., i, p. 43 (1778).
 " *ulmi* Fab., Spec. Ins., ii, p. 393 (1781) in part.
 " " Fourc., Ent. Paris, p. 231 (1785).
 " " Fab., Mant. Ins., ii, p. 319 (1787).
 " *laniger* Gmel., Syst. Nat., Ed. xiii, p. 2221 (1789).
 " *spurius* " " " " " p. 2222 (1789).
 " *ulmi* Oliv., Ency. Meth., vi, p. 97 (1791).
 " " Fab., Ent. Syst., iv, p. 225 (1794) in part.
 " " Schr., Fauna Boica, ii, pt. 1, p. 145 (1801).
Chermes " Latr., Hist. Nat. des Fourmis, p. 330 (1802).
Coccus " Fab., Syst. Rhyng., p. 308 (1803) in part.
 " " Bechst., Forstins., i, p. 286 (1804).
 " " Fonsc., Ann. Soc. Ent. Fr., iii, p. 215 (1834).
 " *spurius* Baer., D'Alton, Zeit. für Zool., p. 173 (1849).
 ? " *gramuntii* Planch., Le Chermes du Chêne, p. 24 (1864).
Nidularia lanigera Targ., Catalogue, p. 34 (1869).
 ? " *gramuntii* " " " p. 34 (1869).
Gossyparia ulmi Sign., Ann. Soc. Ent. Fr., (5), v, p. 21 (1875).
 ? " *gramuntii* " " " " " " " p. 23 (1875).
Coccus ulmi Licht., Bull. " " " " " " " p. lxxvi (1875).
Gossyparia " " " " " " " (6), ii, p. xxxvii (1882).
 " " Loew, Wien. Ent. Zeit., ii, p. 6 (1883).
 " " How., Ins. Life, ii, p. 35 (1889).
 " " Lint., 6th Rep. Ins. N. Y., 1890, p. 189 (1891).
 " " Dougl., Ent. Mon. Mag., xxviii, p. 161 (1892).
 " " Craw, Rep. Cal. Bd. Hort., p. 90 (1894).
 " " Ckll., Ent. News, vi, p. 325 (1895).
 " " Lounsby., Bull. 28, Mass. Exp. Sta., p. 23 (1895).
 " " Lint., 12th Rep. Ins. N. Y., 1896, pp. 292, 317 (1897).
 " " Hillman, Bull. 36, Nev. Exp. Sta., p. 36 (1897).
 " " Kirkland, Mass. Crop Rep., June, p. 35 (1897).
 " " Britton, Rep. Conn. Exp. Sta., p. 273 (1898).
 " " Felt, Bull. 27, N. Y. St. Mus., p. 46 (1899).
 " " How., Can. Ent., xxxi, p. 96 (1899).
 " *spuria* Ckll., Pr. Ac. N. Sci. Ph., p. 268 (1899).
 " *ulmi* Britton, 24th Rep. Conn. Exp. Sta., pp. 319, 336 (1900).
 " " Felt, 5th Rep. Com. Fish, Gam., etc., p. 375 (1900).
 " " Quaint. & Scott, Cocc. Amer., Dec. iii-iv, No. 3 (1901).
 " " Felt, Bull. 57, N. Y. St. Mus., p. 17 (1902).
 " " Kuw., Pr. Cal. Ac. Sci., (3), iii, p. 52 (1902).

Habitat.—Europe; Mass.; N. Y.; N. J.; Md.; D. C.; Ohio; Mich.; Nev.; Cal.

On various species of elm.

Genus **POROCOCCUS** Ckll. Type, tinctorius.

Porococcus Ckll., Ann. Mag. N. H., (7), i, p. 426 (1898).

280. Porococcus pergandei Ckll.

Porococcus pergandei Ckll., Ann. Mag. N. H., (7), i, p. 427 (1898).

Habitat.—Mexico.

On mistletoe on lime-tree.

281. Porococcus tinctorius Ckll.

Porococcus tinctorius Ckll., Ann. Mag. N. H., (7), i, p. 427 (1898).

Habitat.—Mexico.

On mistletoe on oak.

Genus **OLLIFFIELLA** Ckll. Type, cristicola.

Olliffiella Ckll., Science, n. s., iv, p. 299 (1896).

282. Olliffiella cristicola Ckll.

Olliffiella cristicola Ckll., Science, n. s., iv, p. 299 (1896).

“ “ How., Bull. 7, n. s., Dep. Ag., p. 77 (1897).

“ cristata Frog., Agr. Gaz., N. S. W., p. 8 (1898).

Habitat.—New Mexico.

On Quercus Wrightii.

Genus **ERIOCOCCUS** Targ. Type, crispus.

Eriococcus Targ., Catalogue, p. 33 (1869): Sign., Ann. Soc. Ent. Fr., (5), v, p. 29 (1875): Comst., Rep. U. S. Dep. Ag., 1880, p. 337 (1881): Mask., N. Z. Trans., xix, p. 104 (1886); Tr. Roy. Soc. S. Austr., p. 104 (1888): Ckll., Can. Ent. xxxi, p. 276 (1899).

Acanthococcus Sign., Ann. Soc. Ent. Fr., (5), v, p. 34 (1875).

Uhleria Cooke, Treat. Ins. Inj. Fruit & For. Trees, Cal., p. 41 (1881).

s. g. Thekes “Crawf.,” Mask., N. Z. Trans., xxiv, p. 28 (1891): Ckll., Am. Nat., xxxi, p. 589 (1897). Type, eucalypti.

283. Eriococcus aceris (Sign.).

Acanthococcus aceris Sign., Ann. Soc. Ent. Fr., (5), v, p. 35 (1875).

“ “ “ Bull. “ “ “ (6), ii, p. xxxvii (1882).

“ “ “ Loew, Wien. Ent. Zeit., i, p. 60 (1882).

“ “ “ “ “ “ ii, p. 7 (1883).

Eriococcus “ Ckll., Check List, p. 323 (1896).

Habitat.—Austria.

On Acer campestre.

284. Eriococcus adenostomæ Ehrh.

Eriococcus adenostomæ Ehrh., Can. Ent., xxx, p. 244 (1898).

“ “ “ Ckll., “ “ “ p. 246 (1898).

Habitat.—Cal.

On Adenostoma fasciculatum.

285. Eriococcus agonis Full.

Eriococcus agonis Full., Notes on Cocc. W. Austr., p. 8 (1897).

“ “ “ Tr. Ent. Soc. Lond., p. 439 (1899).

Habitat.—W. Australia.

On *Agonis flexuosa*.

286. Eriococcus apiomorphæ Full.

Eriococcus apiomorphæ Full., Notes on Cocc. W. Austr., p. 8 (1897).

“ “ “ Tr. Ent. Soc. Lond., p. 439 (1899).

Habitat.—W. Australia.

“ In empty chambers of female galls of *Apiomorpha maliformis* and in galleries formed by boring beetles; invariably associated with ants.”

287. Eriococcus araucariæ Mask.

Eriococcus araucariæ Mask., N. Z. Trans., xi, p. 218 (1878).

Rhizococcus “ Comst., Rep. U. S. Dep. Ag., 1880, p. 339 (1881).

Uhleria “ Cooke, Treat. Ins. Inj. Fruit & For. Trees, Cal., p. 41 (1881).

Rhizococcus “ Comst., 2nd Rep. Dep. Ent. Corn. Univ., p. 137 (1883).

Eriococcus “ Mask., Ins. Nox. Agr. N. Z., p. 93 (1887).

Rhizococcus “ Comst., Intr. Ent., p. 140 (1888).

“ “ Pack., 5th Rep. U. S. Ent. Com., p. 808 (1890).

Eriococcus “ Berl. e Leon., Cherm. Ital., Fasc. i, No. 9 (1895).

“ “ Green, Ind. Mus. Notes, iv, p. 7 (1896).

“ “ Lounsb., Rep. Ent. Cape Good Hope, p. 19 (1897).

“ “ Leon., Boll. Ent. Agrar., vi, pp. 53, 81, 103, 219 (1899).

“ “ Frog., Agr. Gaz. N. S. W., xi, p. 2 (1900).

Habitat.—N. Zealand; Ceylon; Sandwich Islands; S. Africa; S. Cal.

On *Araucaria excelsa*.

Eriococcus araucariæ minor Mask.

Eriococcus araucariæ var. *minor* Mask., N. Z. Trans., xxvii, pp. 21, 64 (1894).

“ “ “ “ Frog., Agr. Gaz. N. S. W., xi, p. 3 (1900).

Habitat.—Australia.

On *Kunzea*.

288. Eriococcus arenosus Ckll.

Eriococcus arenosus Ckll., Ann. Mag. N. H., (6), xx, p. 514 (1897).

Habitat.—New Mexico.

289. Eriococcus armatus Hemp.

Eriococcus armatus Hemp., Rev. Mus. Paul., iv, p. 383 (1900).

“ “ “ “ Ann. Mag. N. H., (7), vi, p. 394 (1900).

Habitat.—Brazil.

On *Baccharis*.

290. Eriococcus artemisiæ Kuwana.

Eriococcus artemisiæ Kuw., Pr. Cal. Ac. Sci., (3), ii, p. 399 (1901).

Habitat.—California.

On *Artemisia*.

Eriococcus coccineus lutescens Ckll.

Eriococcus coccineus var. *lutescens* Ckll., Ent. News, v, p. 204 (1894).

Habitat.—Nebraska.

On Cactus.

297. Eriococcus confusus Mask.

Eriococcus confusus Mask., N. Z. Trans., xxiv, p. 26 (1891).

“ “ Frog., Ag. Gaz., N. S. W., xi, p. 4 (1900).

Habitat.—Australia.

On *Eucalyptus viminalis*.

298. Eriococcus conspersus Mask.

Eriococcus conspersus Mask., N. Z. Trans., xxv, p. 229 (1892).

“ “ Frog., Ag. Gaz. N. S. W., xi, p. 3 (1900).

Habitat.—N. S. Wales, Australia.

On *Casuarina*.

299. Eriococcus coriaceus Mask.

Eriococcus coriaceus Mask., N. Z. Trans., xxv, p. 229 (1892).

“ “ Gurney, Rep. 7th Meet. Austr. Assoc. Adv. Sci., p. 273 (1898).

Eriococcus coriaceus Frog., Ag. Gaz. N. S. W., xi, p. 3 (1900).

Habitat.—Australia.

On *Eucalyptus*.

300. Eriococcus crispus (Fonsc.).

Coccus crispus Fonsc., Ann. Soc. Ent. Fr., iv, p. 204 (1834).

“ “ Sign., “ “ “ “ (5), vi, p. 613 (1876).

Eriococcus “ Targ., Catalogue. p. 33 (1869).

Habitat.—France.

On fig.

301. Eriococcus cypræformis Full.

Eriococcus cypræformis Full., Notes on Cocc. W. Austr., p. 8 (1897).

“ “ “ “ Tr. Ent. Soc. Lond., p. 440 (1899).

Habitat.—W. Australia.

On *Casuarina*.

302. Eriococcus danthoniæ Mask.

Eriococcus danthoniæ Mask., N. Z. Trans., xxiii, p. 21 (1890).

Habitat.—New Zealand.

On *Danthonia cunninghamii*.

303. Eriococcus dearnessi King.

Eriococcus dearnessi King, Can. Ent., xxxiii, p. 180 (1901).

Habitat.—Canada.

On hawthorn.

304. *Eriococcus devoniensis* (Green).

- Rhizococcus devoniensis* Green, Ent. Record, viii, p. 260 (1896).
 " " Ckll., Am. Nat., xxxi, p. 588 (1897).
Eriococcus " " Check List, Suppl., p. 391 (1899).
 Habitat.—England.
 On *Erica cinerea*.

305. *Eriococcus dubius* Ckll.

- Eriococcus dubius* Ckll., Psyche, vii, Suppl., i, p. 18 (1896).
 " " " Bull. 4, T. s., Dep. Ag., p. 37 (1896).
 * Habitat.—Mexico.

306. *Eriococcus elegans* Full.

- Eriococcus elegans* Full., Notes on Cocc. W. Austr., p. 8 (1897).
 " " " Tr. Ent. Soc. Lond., p. 440 (1899).
 Habitat.—W. Australia.
 On *Casuarina humilis*?

307. *Eriococcus ericæ* Sign.

- Eriococcus ericæ* Sign., Ann. Soc. Ent. Fr., (5), v, p. 31 (1875).
 " " " Ckll., Pr. Ac. N. Sci. Ph., p. 269 (1899).
 Habitat.—France.
 On *Erica*.

308. *Eriococcus eucalypti* Mask.

- Eriococcus eucalypti* Mask., N. Z. Trans., xxiv, p. 27 (1881).
 " " " Koebele, Bull. 21, Div. Ent. Dep. Ag., p. 14 (1890).
 " " " Lidg., The Wombat, iii, p. 92 (1898).
 " " " Frog., Ag. Gaz. N. S. W., xi, p. 5 (1900).
 Habitat.—Australia; Tasmania.
 On *Eucalyptus diversicolor*; *Bursaria spinosa*.

309. *Eriococcus exiguus* Mask.

- Eriococcus exiguus* Mask., Ent. Mon. Mag., xxxiii, p. 243 (1897).
 Habitat.—China; Formosa.

310. *Eriococcus fagicorticis* Mask.

- Eriococcus fagicorticis* Mask., N. Z. Trans., xxiv, p. 27 (1891).
 Habitat.—New Zealand.
 On *Fagus fusca*.

311. *Eriococcus formicola* Newst.

- Eriococcus formicola* Newst., Tr. Ent. Soc. Lond., p. 102 (1897).
 Habitat.—Algeria.
 On *Cynodon dactylon*.

312. *Eriococcus gillettei* Tins.

- Eriococcus gillettei* Tins., Can. Ent., xxxi, p. 46 (1899).
 Habitat.—Colorado.
 On *Juniperus virginiana*.

313. *Eriococcus graminis* Mask.

Eriococcus graminis Mask., Ent. Mon. Mag., xxxiii, p. 243 (1897).

Habitat.—China; Japan.

On grass; bamboo.

314. *Eriococcus greeni* Newst.

Eriococcus greeni Newst., Ent. Mon. Mag., xxxiv, p. 96 (1898).

Habitat.—England.

On grass.

315. *Eriococcus gurneyi* Full.

Eriococcus gurneyi Full., Tr. Ent. Soc. Lond., p. 441 (1899).

Habitat.—W. Australia.

On Rhamnaceæ.

316. *Eriococcus hakeæ* Full.

Eriococcus hakeæ Full., Notes on Cocc. W. Austr., p. 8 (1897).

“ “ “ Tr. Ent. Soc. Lond., p. 441 (1899).

Habitat.—W. Australia.

On *Hakea ilicifolia*.

317. *Eriococcus hoheriæ* Mask.

Eriococcus hoheriæ Mask., N. Z. Trans., xii, p. 298 (1879).

“ “ “ Ins. Nox. Agr. N. Z., p. 93 (1887).

“ “ “ N. Z. Trans., xxiii, p. 20 (1890).

“ “ “ “ “ xxiv, p. 26 (1891).

Habitat.—New Zealand.

On *Hoheria angustifolia*.

318. *Eriococcus imperfectus* Full.

Eriococcus imperfectus Full., Notes on Cocc. W. Austr., p. 8 (1897).

“ “ “ Tr. Ent. Soc. Lond., p. 442 (1899).

Habitat.—W. Australia.

On *Melaleuca*.

319. *Eriococcus insignis* Newst.

Eriococcus insignis Newst., Ent. Mon. Mag., xxvii, p. 164 (1891).

Habitat.—England.

On *Agrostis vulgaris*; *Rumex*; *Pteris*; *Ulex*.

320. *Eriococcus japonicus* Kuwana.

Eriococcus japonicus Kuw., Pr. Cal. Ac. Sci., (3), iii, p. 50 (1902).

Habitat.—Japan.

On *Symplocos myrtacea*.

321. *Eriococcus kemptoni* Parr.

Eriococcus kemptoni Parr., Bull. 98, Kan. Exp. Sta., p. 144 (1900).

Habitat.—Kansas.

On *Andropogon scoparius*.

322. *Eriococcus larreae* Parr. & Ckll.

Eriococcus larreae Parr. & Ckll., The Industrialist, p. 231 (1899).

Habitat.—New Mexico.

On "crowns of *Larrea tridentata* underground."

323. *Eriococcus leptospermi* Mask.

Eriococcus leptospermi Mask., N. Z. Trans., xxiii, p. 22 (1890).

" " Frog., Ag. Gaz. N. S. W., xi, p. 5 (1900).

Habitat.—Australia.

On *Leptospermum laevigatum*; *L. scoparium*.

324. *Eriococcus multispinosus* (Kuhlgatz).

Rhizococcus multispinosus Kuhlgatz, Monats. Kakteenkunde, viii, p. 166 (1898).

Eriococcus " Ckll., Ent. News, xi, p. 595 (1900).

Habitat.—S. America.

On Cactus.

325. *Eriococcus multispinus* (Mask.).

Acanthococcus multispinus Mask., N. Z. Trans., xi, p. 217 (1878).

" " " " " xii, p. 292 (1879).

" " " " " xvii, p. 29 (1884).

Eriococcus " " Ins. Nox. Agr. N. Z., p. 94 (1887).

" " Ckll., Nature, lxi, p. 368 (1900).

Habitat.—New Zealand.

On *Rubus australis*; *Knightia excelsa*; *Cyathodes acerosa*.

***Eriococcus multispinus laevigatus* Mask.**

Eriococcus multispinus var. *laevigatus* Mask., N. Z. Trans., xxiii, p. 20 (1890).

" " " " Frog., Ag. Gaz. N. S. W., xi, p. 6 (1900).

Habitat.—New South Wales.

On *Acacia armata*; *Epacris longifolia*.

326. *Eriococcus neglectus* Ckll.

Eriococcus neglectus Ckll., Psyche, vii, Suppl., i, p. 8 (1895).

Habitat.—New Mexico.

On *Atriplex canescens*.

327. *Eriococcus onukii* Kuwana.

Eriococcus onukii Kuw., Pr. Cal. Ac. Sci., (3), iii, p. 51 (1902).

Habitat.—Japan.

On *Arundinaria hindsii* var. *graminæ*.

328. *Eriococcus pallidus* Mask.

Eriococcus pallidus Mask., N. Z. Trans., xvii, p. 29 (1884).

" " " Ins. Nox. Agr. N. Z., p. 95 (1887).

" " " N. Z. Trans., xxiii, p. 21 (1890).

" " Newst., Ent. Mon. Mag., xxvii, p. 166 (1891).

" " Mask., N. Z. Trans., xxvii, p. 64 (1894).

Habitat.—New Zealand.

On *Myoporum lætum*; *Elæocarpus dentatus*; *Metrosideros robusta*;
Fagus menziesii.

329. *Eriococcus palmeri* Ckll.

Eriococcus palmeri Ckll., Pr. Ac. N. Sci. Ph., p. 268 (1899).

Habitat.—Carmen Island, Lower California.

On *Bourreria sonora*.

Eriococcus palmeri var. **A**, Ckll.

Eriococcus palmeri var. A, Ckll., Ann. Mag. N. H., (7), ix, p. 23 (1902).

Habitat.—California.

On *Eriogonum fasciculatum*.

330. *Eriococcus paradoxus* Mask.

Eriococcus paradoxus Mask., Tr. Roy. Soc. S. Austr., p. 104 (1888).

“ “ “ N. Z. Trans., xxiii, p. 22 (1889).

“ “ “ “ “ xxviii, p. 399 (1896).

“ “ “ “ “ xxix, p. 318 (1897).

“ “ Barlow, Ind. Mus. Notes, iv,

No. 4, p. 210 (1898).

Eriococcus paradoxus Frog., Ag. Gaz. N. S. W., xi, p. 6 (1900).

Habitat.—S. Australia; India.

On *Pittosporum undulatum*; *P. bicolor*.

Eriococcus paradoxus simplex Mask.

Eriococcus paradoxus var. *simplex* Mask., N. Z. Trans., xxix, p. 244 (1897).

Habitat.—S. Australia.

On *Pittosporum undulatum*.

Eriococcus paradoxus indicus Mask.

Eriococcus paradoxus var. *indicus* Mask., N. Z. Trans., xxix, p. 318 (1897).

“ “ “ “ “ Barlow, Ind. Mus. Notes, iv, No. 4, p.

210 (1897).

Habitat.—India.

On *Helicteres isora*.

331. *Eriococcus perplexus* Hemp.

Eriococcus perplexus Hemp., Rev. Mus. Paul., iv, p. 381 (1900).

“ “ “ “ “ Ann. Mag. N. H., (7), vi, p. 393 (1900).

Habitat.—Brazil.

On *Myrtaceæ*.

332. *Eriococcus phyllocladi* Mask.

Eriococcus phyllocladi Mask., N. Z. Trans., xxiv, p. 25 (1891).

Habitat.—New Zealand.

On *Phyllocladus trichomanoides*.

333. *Eriococcus quercus* (Comst.).

- Rhizococcus quercus* Comst., Rep. U. S. Dep. Ag., 1880, p. 340 (1881).
 " " " 2nd Rep. Dep. Ent. Corn. Univ., p. 137 (1883).
 " " Pack., 5th Rep. U. S. Ent. Com., p. 103 (1890).
Eriococcus " King, Can. Ent., xxxi, p. 110 (1899).
 " " Ckll., Jn. N. Y. Ent. Soc., vii, p. 257 (1899).
 Habitat.—Mass.; Fla.; New Mexico; Mexico.
 On oak; gall-berry; *Vaccinium corymbosum*; grass.

***Eriococcus quercus toumeyii* Ckll.**

- Eriococcus quercus toumeyii* Ckll., Ent. News, xi, p. 594 (1900).
 Habitat.—Arizona.
 On *Prosopis velutina*.

334. *Eriococcus raithbyi* Mask.

- Eriococcus raithbyi* Mask., N. Z. Trans., xxii, p. 145 (1889).
 " " Newst., Ent. Mon. Mag., xxvii, p. 165 (1891).
 Habitat.—New Zealand.
 On *Fagus menziesii*.

335. *Eriococcus rorismarinus* (Fonsc.).

- Coccus rorismarinus* Fonsc., Ann. Soc. Ent. Fr., iii, p. 217, pl. 4 (1834).
Eriococcus " Sign., " " " " (5), v, p. 33 (1875).
Coccus " Licht., " " " " (5), ix, p. 44 (1879).
 Habitat.—France.
 On *Rosmarinus*.

336. *Eriococcus simplex* Mask.

- Eriococcus simplex* Mask., N. Z. Trans., xxix, p. 317 (1897).
 " *simplexa* Lidg., The Wombat, iv, p. 53 (1899).
 Habitat.—Australia.
 On *Eucalyptus*.

***Eriococcus simplex dealbata* Mask.**

- Eriococcus simplex* var. *dealbata* Mask., N. Z. Trans., xxix, p. 317 (1897).
 " " " " Full., Tr. Ent. Soc. Lond., p. 442 (1899).
 " *tricarinatus* Full., Notes on Cocc. W. Austr., p. 8 (1897).
 " " " Tr. Ent. Soc. Lond., p. 442 (1899).
 Habitat.—W. Australia.
 On *Eucalyptus gomphocephala*.

337. *Eriococcus spiniger* Mask.

- Eriococcus spiniger* Mask., N. Z. Trans., xxviii, p. 398 (1896).
 " " Frog., Ag. Gaz. N. S. W., xi, p. 7 (1900).
 Habitat.—Australia.
 On *Eucalyptus*.

338. *Eriococcus tepperi* Mask.

Eriococcus tepperi Mask., N. Z. Trans., xxiv, p. 29 (1891).

" " Lidg., The Wombat, iii, p. 92 (1898).

" " Frog., Ag. Gaz. N. S. W., xi, p. 8 (1900).

Habitat.—Australia; Tasmania.

On *Eucalyptus globulus*; *Bursaria spinosa*.

339. *Eriococcus thymelææ* Newst.

Eriococcus thymelææ Newst., Tr. Ent. Soc. Lond., p. 102 (1897).

Habitat.—Algeria.

On *Thymelæa hirsuta*.

340. *Eriococcus thymi* (Schr.).

Coccus thymi Schr., Faun. Boica, p. 146 (1801).

Eriococcus " Sign., Ann. Soc. Ent. Fr., (5), v, p. 32 (1875).

Habitat.—Europe.

341. *Eriococcus tinsleyi* Ckll.

Eriococcus tinsleyi Ckll., Can. Ent., xxx, pp. 247, 317 (1898).

Habitat.—N. Mexico.

On *Atriplex canescens*; *Malvastrum coccineum*.

***Eriococcus tinsleyi cryptus* Ckll.**

Eriococcus tinsleyi var. *cryptus* Ckll., Can. Ent., xxxiii, p. 210 (1891).

Habitat.—N. Mexico.

On roots of *Gutierrezia*.

Prof. Cockerell thinks *cryptus* may be a distinct species.

Genus *GYMNOCOCCUS* Dougl. Type, agavium.

Gymnococcus Dougl., Ent. Mon. Mag., xxv, p. 150 (1888): Ckll. & Parr.,

The Industrialist, p. 162 (1899): Ckll., Can. Ent., xxxi, p. 277 (1899).

342. *Gymnococcus agavium* (Dougl.).

Coccus agavium Dougl., Ent. Mon. Mag., xxv, p. 150 (1888).

Gymnococcus " Ckll., Check List, p. 323 (1896).

Coccus (*Gymnococcus*) *agavium* Dougl., Ent. Mon. Mag., xxxiii, p. 12 (1897).

Gymnococcus " Parr., Bull. 98, Kan. Exp. Sta., p. 141 (1900).

Habitat.—Europe.

On Agave.

343. *Gymnococcus natus* Parr.

Gymnococcus natus Parr., Bull. 98, Kan. Exp. Sta., p. 143 (1900).

Habitat.—Kansas.

On grass.

344. *Gymnococcus ruber* Parr. & Ckll.

Gymnococcus ruber Parr. & Ckll., *The Industrialist*, p. 162 (1899).

" " " *Bull.* 98, *Kan. Exp. Sta.*, p. 142 (1900).

Habitat.—New Mexico.

On grass.

Genus **TECTOCOCCUS** Hemp. Type, ovatus.

Tectococcus Hemp., *Rev. Mus. Paul.*, iv, p. 406 (1900); *Ann. Mag. N. H.*, (7), vii, p. 69 (1901).

345. *Tectococcus ovatus* Hemp.

Tectococcus ovatus Hemp., *Rev. Mus. Paul.*, iv, p. 406 (1900).

" " " *Ann. Mag. N. H.*, (7), vii, p. 119 (1901).

Habitat.—Brazil.

On Myrtaceæ.

Genus **DACTYLOPIUS** Costa. Type, coccus.

||*Coccus* Ratz., *Mediz. Zool.*, ii, p. 215 (1833): *Burm.*, *Handb. Ent.*, ii, pt. 1, p. 72 (1835); *Amy. & Serv.*, *Ins.*, *Hem.*, p. 626 (1843); *Sign.*, *Ann. Soc. Ent. Fr.*, (5), v, p. 346 (1875); *Comst.*, *Rep. U. S. Dep. Ag.*, 1880, p. 345 (1881).

Dactylopius Costa, *Faun. Regn. Nap.*, *Cocc.*, p. 15 (1835); *Ckll.*, *Ann. Mag. N. H.*, (7), ix, p. 453 (1902).

346. *Dactylopius coccus* Costa. (*Cochineal insect*.)

— — — Hernandez, *Nova Plantarum*, p. 78 (1651).

De Cochenille Richter, *Traité phys. de la Coch.* (1701).

— — — Sloane, *A Voyage to Jamaica, etc.*, ii, p. 153 (1723).

La Cochenille Ruscher, *Nat. Hist. de la Coch.* (1729).

— — — Breyn. *Hist. Nat. Coch.* (1731).

La Cochenille Reaum., *Mem. Ins.*, iv, p. 87 (1738).

— — — Bosc, *Dissert. Coch.* (1739).

The Cochineal Delius, *De purpura et coccinella* (1753).

— — — Brown, *The Civil & Nat. Hist. of Jamaica*, p. 435 (1756).

Cochineal Insects, Ellis, *Philos. Trans.*, lii, p. 661 (1762).

Die Cochenille Lederm., *Mikrosk.*, *Ergatz.* (1763).

||*Coccus cacti* Goeze, *Ent. Beitr.*, ii, p. 341 (1778).

" " *Mod.*, *Act. Goth.*, i, p. 44 (1778).

" " *Fab.*, *Spec. Ins.*, ii, p. 395 (1781) in part.

— — — Zinck., *Die Coccionellæ natura, viribus et usu.* (1787).

La Cochenille Thiér Menonv., *Traité de la culture du Nopal.*, ii, p. 8 (1787).

— — — Anderson, *Letters to Sir J. Banks* (1787-90).

Coccus cacti Gmel., *Syst. Nat.*, Ed. xiii, i, pt. 4, p. 2220 (1789) in part.

" " *Oliv.*, *Ency. Meth.*, vi, p. 98 (1791).

— — — De Alzate, *Mem. Ins. grana Coch.* (1795).

- Coccus cacti Turton, Syst. Nat., ii, pt. i, p. 714 (1801).
 " " De Tigny, Hist. Nat. Ins., iv, p. 230 (1802).
 " " Fab., Syst. Rhynch., p. 311 (1803) in part.
 " " Latr., Dict. d'Hist. Nat., v, p. 572 (1803).
 " " " Hist. Nat. Crust. Ins., xii, p. 584 (1804).
 Die Cochenille Zimm., Taschenb. der Reisen, p. 134 (1806).
 Coccus cacti Chaumeton, Cochenille, Dict. Sci. Med., v, p. 504 (1813).
 La Coccus du Nopal Latr., Dict. d'Hist. Nat., ix, p. 504 (1817).
 Coccus cacti Guér., Dict. class. d' Hist. Nat., iv, p. 261 (1823).
 " " Jameson, Edinb. New Phil. Journ., iii, p. 195 (1827).
 " " Kirby & Spence, Intr. Ent., i, p. 321 (1828).
 La Coccus du Nopal Latr., Cuvier's Regne Animale, v, p. 231 (1829).
 Coccus cacti Ratz., Mediz. Zool., ii, p. 217 (1833).
 Dactylopius coccus Costa, Faun. Regn. Nap., Cocc., p. 16 (1835).
 Coccus cacti Burm., Handb. Ent., ii, p. 72 (1835).
 Cochenelle du Nopal Audouin, Bull. Soc. Ent. Fr., v, p. 68 (1836).
 " " " " C. R. Soc. Biol., ix, p. 69 (1839).
 Coccus cacti Blanch., Hist. Nat. Ins., iii, p. 213 (1840).
 Pseudococcus cacti Westw., Mod. Class. Ins., ii, p. 445 (1840).
 Coccus cacti Amy. et Serv., Hist. Nat. Ins., p. 629 (1843).
 " " Amy., Ann. Soc. Ent. Fr., (2), vi, p. 475 (1848).
 ——— Koll., Sitz. Akad. Wiss., Wien, vii, p. 333 (1851).
 Coccus cacti Clauss,*Müller, Archiv., p. 150 (1859).
 " " Targ., Studii sul. Cocc., pp. 18, 19, 27 (1867).
 " " " Catalogue, p. 32 (1869).
 " (Pseudococcus) cacti Pack., Guide, p. 527 (1872).
 " cacti Sign., Ann. Soc. Ent. Fr., (5), v, p. 347 (1875).
 " " Mark, Anat. Coccidæ, p. 14 (1876).
 " " ——— Ency. Brit., Ed. ix, vi, p. 97 (1878).
 " " Comst., Rep. U. S. Dep. Ag., 1880, p. 346 (1881).
 " " Sicard, Elém. Zool., p. 390 (1883).
 " " Blanch., Les Coccides utiles, p. 70 (1883).
 " " Uhler, St. Nat. Hist., ii, p. 217 (1884).
 " " Comst., Intr. Ent., p. 139 (1888).
 " " Wiepen, Die Geog. Verbr. Coch. (1890).
 " " Mayer, Mitth. Zool. Sta., Neapel, x, p. 505 (1892).
 " " " Ent. Nach., xviii, p. 302 (1892).
 " " Ckll., Am. Nat., xxviii, p. 1041 (1893).
 " " " Bull. Bot. Dep. Jam., p. 17 (1894).
 " " Visart, Riv. Pat. Veg., iii, p. 39 (1894).
 " " Comst., Man. Ins., p. 166 (1895).
 " " Lint., 11th Rep. Ins. N. Y., p. 201 (1896).
 " " Ckll., Bull. 4, T. s., Dep. Ag., p. 34 (1896).
 " " Theobald, Ins. Life, London, p. 185 (1896).
 " " Newst., Ent. Mon. Mag., xxxiii, p. 76 (1897).
 " " Smith, Econ. Ent., p. 106 (1897).

Coccus cacti Howard, Bull. 9, n. s., Dep. Ag., p. 38 (1897).

" " Ckll., Pr. Ac. N. Sci. Ph., p. 260 (1899).

Pseudococcus cacti Hemp., Rev. Mus. Paul., iv, p. 380 (1900).

" signoreti Ckll., Science, n. s., ix, p. 992 (1900).

Dactylopius coccus " Ann. Mag. N. H., (7), ix, p. 454 (1902).

" " Fern. M. E., Can. Ent., xxxiv, p. 233 (1902).

Habitat.—Mexico; West Indies; Madeira; Canary Islands; Peru; India; S. Spain and other European countries; Florida; California.

On *Opuntia coccinelliferi* and other species.

347. *Dactylopius confusus* (Ckll.).

Coccus confusus Ckll., Tr. Am. Ent. Soc., xx, p. 366 (1893).

" " " " Am. Nat., xxvii, p. 1043 (1893).

" " " " " " xxix, p. 728 (1895).

* " cacti subsp. *confusus* Ckll., Bull. 4, T. s., Dep. Ag., pp. 34, 35 (1896).

Coccus confusus Newst., Ent. Mon. Mag., xxiii, p. 76 (1897).

Pseudococcus confusus Ckll., Biol. Centr. Amer., ii, pt. 2, p. 6 (1899).

Habitat.—Ariz.; N. Mex.; Mex.

On *Opuntia* spp.

Dactylopius confusus newsteadi (Ckll.).

Coccus confusus subsp. *newsteadi* Ckll., Science, n. s., viii, p. 675 (1898).

" " " " " " Bull. 32, Ariz. Exp. Sta., p. 284 (1899).

Habitat.—Ariz.; Colorado; Tex.

On *Opuntia*.

348. *Dactylopius tomentosus* (Lam.).

Coccus tomentosus Lam., Hist. Nat. Anim., Ed. ii, iv, p. 115 (1835).

" " Sign., Ann. Soc. Ent. Fr., (5), v, p. 349 (1875).

" " Licht., Bull. " " " (6), iv, p. cvi (1884).

" " Ckll., Bull. 4, T. s., Dep. Ag., p. 35 (1896).

" cacti var. *opuntiae* " Licht." Ckll., Bull. 4, T. s., Dep. Ag., p. 35 (1896).

Coccus tomentosus Newst., Ent. Mon. Mag., xxxiii, pp. 75, 76 (1897).

Pseudococcus " Ckll., Biol. Centr. Amer., ii, pt. 2, p. 5 (1899).

Habitat.—England; New Mexico; Arizona; Mexico.

On *Opuntia fulgida*.

Genus *CARPOCHLOROIDES* Ckll. Type, *viridis*.

Carpochloroides Ckll., The Entom., xxxii, p. 12 (1899); Can. Ent., xxxi, p. 277 (1899).

349. *Carpochloroides viridis* Ckll.

Carpochloroides viridis Ckll., The Entom., xxxii, p. 12 (1899).

" " Hemp., Rev. Mus. Paul., iv, p. 393 (1900).

Habitat.—Brazil.

On *Eugenia*; *Myrtaceae*.

Genus **APIOCOCCUS** Hemp. Type, gregarius.

Apiococcus Hemp., Rev. Mus. Paul., iv, p. 401 (1900); Ann. Mag. N. H. (7), vii, p. 110 (1901).

350. *Apiococcus asperatus* Hemp.

Apiococcus asperatus Hemp., Rev. Mus. Paul., iv, p. 404 (1900).

" " " Ann. Mag. N. H., (7), vii, p. 117 (1901).

Habitat.—Brazil.

On Myrtaceæ.

351. *Apiococcus globosus* Hemp.

Apiococcus globosus Hemp., Rev. Mus. Paul., iv, p. 405 (1900):

" " " Ann. Mag. N. H., (7), vii, p. 118 (1901).

Habitat.—Brazil.

On Myrtaceæ.

352. *Apiococcus gregarius* Hemp.

Apiococcus gregarius Hemp., Rev. Mus. Paul., iv, p. 402 (1900).

" " " Ann. Mag. N. H., (7), vii, p. 116 (1901).

Habitat.—Brazil.

On Myrtaceæ.

353. *Apiococcus singularis* Hemp.

Apiococcus singularis Hemp., Rev. Mus. Paul., iv, p. 403 (1900).

" " " Ann. Mag. N. H., (7), vii, p. 117 (1901).

Habitat.—Brazil.

On Myrtaceæ.

Genus **CAPULINIA** Sign. Type, sallei.

Capulinia Sign., Ann. Soc. Ent. Fr., (5), v, p. 27 (1875); Ckll., Can. Ent., xxxi, p. 277 (1899).

354. *Capulinia crateraformans* Hemp.

Capulinia crateraformans Hemp., Rev. Mus. Paul., iv, p. 395 (1900).

" crateraformis " Can. Ent., xxxii, p. 3 (1900).

Habitat.—Brazil.

On *Eugenia jaboticaba*.

355. *Capulinia jaboticabæ* von Iher.

Capulinia jaboticabæ Iher., Revista Agricola, p. 188 (1898).

" " Towns. & Ckll., Jn. N. Y. Ent. Soc., vi, p. 174 (1898).

" " Hemp., Rev. Mus. Paul., iii, p. 51 (1898).

" " " " " " iv, p. 394 (1900).

" " " Can. Ent., xxxii, p. 4 (1900).

Habitat.—Brazil.

On *Eugenia jaboticaba*; *Myrciaria cauliflora*.

356. *Capulinia sallei* Sign.

Capulinia sallei Sign., Ann. Soc. Ent. Fr., (5), v, p. 28 (1875).

" " Towns. & Ckll., Jn. N. Y. Ent. Soc., vi, p. 173 (1898).

" " Hemp., Can. Ent., xxxii, p. 4 (1900).

Habitat.—Mexico.

On "Capulino"; "Escobillo."

Genus **CYLINDROCOCCUS** Mask. Type, casuarinæ.

Cylindrococcus Mask., N. Z. Trans., xxiv, p. 41 (1891); Ckll., Can. Ent., xxxi, p. 277 (1899).

Crocidocysta Rübs., Berl. Ent. Zeit., xxxix, p. 218 (1894).

357. *Cylindrococcus amplior* Mask.

Cylindrococcus sp. (?) Mask., N. Z. Trans., xxiv, p. 44 (1891).

" amplior " " " xxv, p. 240 (1892).

Crocidocysta froggatti Rübs., Berl. Ent. Zeit., xxxix, p. 219 (1894).

" " Ckll., Check List, Suppl., p. 392 (1899).

Habitat.—Australia.

On *Casuarina quadrivalvis*.

358. *Cylindrococcus casuarinæ* Mask.

Cylindrococcus casuarinæ Mask., N. Z. Trans., xxiv, p. 41 (1891).

" " Rübs., Berl. Ent. Zeit., xxxix, p. 217 (1894).

" " Mask., Ent. Mon. Mag., xxxii, p. 226 (1896).

Habitat.—Australia.

On *Casuarina quadrivalvis*.

359. *Cylindrococcus gracilis* Full.

Cylindrococcus gracilis Full., Notes on Cocc. W. Austr., p. 10 (1897).

" " " Tr. Ent. Soc. Lond., p. 451 (1899).

Habitat.—W. Australia.

On *Casuarina humilis*?

360. *Cylindrococcus spiniferus* Mask.

Cylindrococcus spiniferus Mask., N. Z. Trans., xxiv, p. 43 (1891).

" " Frog., Ag. Gaz. N. S. W., p. 18 (1898).

Habitat.—Australia.

On *Casuarina quadrivalvis*.

Genus **CISSOCOCCUS** Ckll. Type, fulleri.

Cissococcus Ckll., Ann. Mag. N. H., (7), ix, p. 23 (1902).

361. *Cissococcus fulleri* Ckll.

Cissococcus fulleri Ckll., Ann. Mag. N. H., (7), ix, p. 23 (1902).

Habitat.—S. Africa.

On *Cissus cuneifolia*.

Genus **OLLIFFIA** Full. Type, eucalypti.

Olliffia Full., Tr. Ent. Soc. Lond., p. 442 (1899).

362. Olliffia eucalypti Full.

Olliffia eucalypti Full., Notes on Cocc. W. Austr., p. 8 (1897).

“ “ “ Tr. Ent. Soc. Lond., p. 443 (1899).

Habitat.—W. Australia.

On Eucalyptus.

Genus **SPHÆROCOCOPSIS** Ckll. Type, inflatipes.

Sphærocopsis Ckll., Pr. Ac. N. Sci. Ph., p. 262 (1899); Can. Ent., xxxi, p. 277 (1899).

363. Sphærocopsis inflatipes (Mask.).

Sphærococcus inflatipes Mask., N. Z. Trans., xxv, p. 238 (1892).

Sphærocopsis “ Ckll., Pr. Ac. N. Sci. Ph., p. 262 (1899).

Habitat.—Australia.

On Eucalyptus.

Sphærocopsis inflatipes simplicior (Mask.).

Sphærococcus inflatipes var. simplicior Mask., N. Z. Trans., xxviii, p. 403 (1895).

Habitat.—Australia.

On Eucalyptus viminalis.

Genus **SPHÆROCOCCUS** Mask. Type, casuarinæ.

Sphærococcus Mask., N. Z. Trans., xxiv, p. 39 (1891) no desc.; xxv, p. 237 (1892); Ckll., Can. Ent., xxxi, p. 277 (1899).

364. Sphærococcus acaciæ Mask.

Sphærococcus acaciæ Mask., N. Z. Trans., xxv, p. 237 (1892).

Habitat.—Australia.

On Acacia.

Sphærococcus acaciæ melaleucæ Ckll.

Sphærococcus melaleucæ Mask., N. Z. Trans., xxvi, p. 94 (1893).

“ acaciæ var. melaleucæ Ckll., Check List, Suppl., p. 392 (1899).

Habitat.—N. S. Wales, Australia.

On Melaleuca linariifolia.

365. Sphærococcus casuarinæ Mask.

Sphærococcus casuarinæ Mask., N. Z. Trans., xxiv, p. 39 (1891).

Habitat.—Australia.

On Casuarina quadrivalvis.

366. Sphærococcus disticlium (Kuwana).

Pseudolecanium disticlium Kuw., Ent. News, xiii, p. 134 (1902).

Habitat.—Palo Alto, Cal.

On Distichlis maritima.

367. *Sphærococcus elevans* Mask.

Sphærococcus elevans Mask., N. Z. Trans., xxvii, p. 68 (1894).

Habitat.—Australia.

On *Eucalyptus dumosa*.

368. *Sphærococcus ethelæ* Full.

Sphærococcus ethelæ Full., Notes on Cocc. W. Austr., p. 9 (1897).

“ “ “ Tr. Ent. Soc. Lond., p. 449 (1899).

Habitat.—W. Australia.

On *Casuarina*.

369. *Sphærococcus ferrugineus* Frog.

Sphærococcus ferrugineus Frog., Pr. Linn. Soc. N. S. W., p. 378 (1898).

“ “ Mask., N. Z. Trans., xxx, p. 378 (1898).

Habitat.—Queensland.

On *Melaleuca*.

370. *Sphærococcus froggatti* Mask.

Sphærococcus froggatti Mask., N. Z. Trans., xxvi, p. 94 (1893).

“ “ Frog., Ag. Gaz. N. S. W., p. 19 (1898).

Habitat.—Australia.

On *Melaleuca linariifolia*.

371. *Sphærococcus leaii* Full.

Sphærococcus leaii Full., Notes on Cocc. W. Austr., p. 9 (1897).

“ “ “ Tr. Ent. Soc. Lond., p. 448 (1899).

Habitat.—W. Australia.

On *Casuarina*.

372. *Sphærococcus leptospermi* Mask.

Sphærococcus leptospermi Mask., N. Z. Trans., xxvi, p. 92 (1893).

“ “ “ “ “ xxvii, p. 68 (1894).

Habitat.—N. S. Wales.

On *Leptospermum lævigatum*.

373. *Sphærococcus morrisoni* Full.

Sphærococcus morrisoni Full., Notes on Cocc. W. Austr., p. 9 (1897).

“ “ “ Tr. Ent. Soc. Lond., p. 450 (1899).

Habitat.—W. Australia.

On *Melaleuca*.

***Sphærococcus morrisoni elongatus* Full.**

Sphærococcus morrisoni var. *elongata* Full., Tr. Ent. Soc. Lond., p. 450 (1899).

Habitat.—W. Australia.

374. *Sphærococcus obscuratus* Mask.

Sphærococcus obscuratus Mask., N. Z. Trans., xxviii, p. 403 (1895).

Habitat.—Australia.

On *Acacia longifolia*; *Eucalyptus obtusiflora*.

375. *Sphærococcus pirogallis* Mask.

Sphærococcus pirogallis Mask., N. Z. Trans., xxvi, p. 95 (1893).

" " Frog., Agr. Gaz. N. S. W., p. 18 (1898).

Habitat.—Australia.

On *Leptospermum flavescens*.

376. *Sphærococcus populi* Mask.

Sphærococcus populi Mask., N. Z. Trans., xxx, p. 248 (1898).

Habitat.—Japan.

377. *Sphærococcus pulchellus* Mask.

Sphærococcus pulchellus Mask., N. Z. Trans., xxix, p. 324 (1896).

" " Full., Notes on Cocc. W. Austr., p. 9 (1897).

" " " Tr. Ent. Soc. Lond., p. 448 (1899).

Habitat.—W. Australia.

On *Hypocalymma angustifolium*; *Melaleuca*.

378. *Sphærococcus rugosus* Mask.

Sphærococcus rugosus Mask., N. Z. Trans., xxix, p. 322 (1896).

Habitat.—W. Australia.

On *Leptospermum*; *Agonis linearifolia*.

***Sphærococcus rugosus elongatus* Mask.**

Sphærococcus rugosus var. *elongatus* Mask., N. Z. Trans., xxix, p. 323 (1896).

" " " " Full., Notes on Cocc. W. Austr., p.

9 (1897).

Habitat.—W. Australia.

On *Agonis linearifolia*.

379. *Sphærococcus socialis* Mask.

Sphærococcus socialis Mask., N. Z. Trans., xxix, p. 325 (1896).

Habitat.—W. Australia.

On "A Myrtaceous plant."

380. *Sphærococcus stypheliæ* Mask.

Sphærococcus stypheliæ Mask., N. Z. Trans., xxvii, p. 67 (1894).

Habitat.—N. S. Wales, Australia.

On *Styphelia elliptica*.

381. *Sphærococcus sylvestris* Ckll. & King.

Sphærococcus sylvestris Ckll. & King, Can. Ent., xxx, p. 326 (1898).

" " " " " " xxxi, p. 112 (1899).

Habitat.—Mass.

On white oak.

382. *Sphærococcus tepperi* Full.

Sphærococcus tepperi Full., Notes on Cocc. W. Austr., p. 9 (1897).

" " " " Tr. Ent. Soc. Lond., p. 449 (1899).

Habitat.—W. Australia.

On *Melaleuca*.

Genus **CRYPTOKERMES** Hemp. Type, brasiliensis.

Cryptokermes Hemp., Rev. Mus. Paul., iv, p. 398 (1900); Ann. Mag. N. H., (7), vii, p. 113 (1901).

383. *Cryptokermes brasiliensis* Hemp.

Cryptokermes brasiliensis Hemp., Rev. Mus. Paul., iv, p. 398 (1900).

" " " Ann. Mag. N. H., (7), vii, p. 113 (1901).

" " Ckll., " " " " x, p. 469 (1902).

Habitat.—Brazil; Mexico.

On *Schinus*; *Mimosa*.

Genus **OUROCOCCUS** Full. Type, eucalypti.

Ourococcus Full., Tr. Ent. Soc. Lond., p. 452 (1899).

384. *Ourococcus casuarinae* Full.

Ourococcus casuarinae Full., Notes on Cocc. W. Austr., p. 10 (1897).

" " " Tr. Ent. Soc. Lond., p. 453 (1899).

Habitat.—W. Australia.

On *Casuarina*.

385. *Ourococcus cobbii* Full.

Ourococcus cobbii Full., Notes on Cocc. W. Austr., p. 10 (1897).

" " " Tr. Ent. Soc. Lond., p. 453 (1899).

Habitat.—W. Australia.

On *Eucalyptus*.

386. *Ourococcus eucalypti* Full.

Ourococcus eucalypti Full., Notes on Cocc. W. Austr., p. 10 (1897).

" " " Tr. Ent. Soc. Lond., p. 452 (1899).

Habitat.—W. Australia.

On *Eucalyptus*.

Genus **PHÆNICOCOCCUS** Ckll. Type, marlatti.

Phœnicococcus Ckll., Pr. Ac. N. Sci. Ph., p. 262 (1899).

387. *Phœnicococcus marlatti* Ckll.

Phœnicococcus marlatti Ckll., Pr. Ac. N. Sci. Ph., p. 262 (1899); Can. Ent., xxxi, p. 277 (1899).

Habitat.—Algeria.

On date-palm.

Genus **EPICOCCUS** Ckll. Type, acaciæ.

Epicoccus Ckll., Ann. Mag. N. H., (7), ix, p. 24 (1902).

388. *Epicoccus acaciæ* (Mask.).

Coccus acaciæ Mask., N. Z. Trans., xxix, p. 319 (1896).

" " Full., Tr. Ent. Soc. Lond., p. 439 (1899).

Epicoccus " Ckll., Ann. Mag. N. H., (7), ix, p. 24 (1902).

Habitat.—W. Australia.

On *Acacia pulchella*.

Genus **HALIMOCOCCUS** Ckll. Type, lampas.

Halimococcus Ckll., The Entom., xxxv, p. 15 (1902).

389. *Halimococcus lampas* Ckll.

Halimococcus lampas Ckll., The Entom., xxxv, p. 15 (1902).

Habitat.—Natal.

On leaves of palm.

Genus **PUTO** Sign. Type, antennata.

|| *Putonia* Sign., Ann. Soc. Ent. Fr., (5), v, p. 341 (1875).

Puto " " " " " " " " p. 394 (1875).

390. *Puto antennata* (Sign.).

Putonia antennata Sign., Ann. Soc. Ent. Fr., (5), v, p. 341 (1875).

Puto " Ckll., Check List, p. 324 (1896).

Habitat.—France.

On pine.

Genus **PHENACOCCUS** Ckll. Type, aceris.

|| *Pseudococcus* Sign. (non Westw.), Ann. Soc. Ent. Fr., (5), v, p. 328 (1875):

Comst., Rep. U. S. Dep. Ag., 1880, p. 345 (1881).

Phenacoccus Ckll., Ent. News, iv, p. 318 (1893); Can. Ent., xxxi, p. 278 (1899).

s. g. *Paroudablis* Ckll., The Entom., xxxiii, p. 87 (1900). Type, piceæ.

391. *Phenacoccus acericola* (King).

Pseudococcus aceris Smith, E. A., N. Am. Ent., p. 73 (1880).

" " Comst., Rep. U. S. Dep. Ag., 1880, p. 345 (1881).

" " " 2nd Rep. Dep. Ent. Corn. Univ., p. 136 (1883).

" " Pack., 5th Rep. U. S. Ent. Com., p. 418 (1890).

" " How., Ins. Life, vii, p. 235 (1894).

Phenacoccus " Ckll., Check List, p. 324 (1896).

Pseudococcus " Cooley, Bull. 36, Mass. Exp. Sta., p. 8 (1896).

" " " 17, n. s., Dep. Ag., p. 61 (1898).

Phenacoccus " Lugger, 6th Rep. Ent. Minn. Exp. Sta., p. 213 (1900).

" " Felt, Bull. N. Y. St. Mus., ix, p. 355 (1901).

" *acericola* King, Can. Ent., xxxiv, p. 211 (1902).

Habitat.—Mass.; R. I.; N. Y.; N. J.; Pa.; Md.; Ohio; Ill.; Minn.

On maple; hornbeam; lime; horse chestnut.

392. *Phenacoccus aceris* (Sign.).

Pseudococcus aceris Sign., Ann. Soc. Ent. Fr., (5), v, p. 329 (1875).

" " Dougl., Ent. Mon. Mag., xxvi, p. 153 (1890).

" " Sulc, " " " xxx, p. 87 (1894).

Habitat.—Europe.

On maple.

393. *Phenacoccus æsculi* (Sign.).

Pseudococcus æsculi Sign., Ann. Soc. Ent. Fr., (5), v, p. 330 (1875).

Phenacoccus " Ckll., Check List, p. 324 (1896).

Habitat.—Europe.

On " Les marronniers."

394. *Phenacoccus americanæ* King & Ckll.

Phenacoccus americanæ King & Ckll., Can. Ent., xxix, p. 91 (1897).

" " " Can. Ent., xxxi, p. 112 (1899).

Habitat.—Mass.

In nests of *Lasius americanus*.

395. *Phenacoccus artemisiæ* Ehrh.

Phenacoccus artemisiæ Ehrh., Can. Ent., xxxii, p. 313 (1900).

Habitat.—California.

On *Artemisia californica*.

396. *Phenacoccus asteliæ* (Mask.).

Pseudococcus asteliæ Mask., N. Z. Trans., xvi, p. 139 (1883).

" " " Ins. Nox. Ag. N. Z., p. 102 (1887).

" " " The Entom., xxvii, p. 46 (1894).

Phenacoccus " Ckll., Check List, p. 325 (1896).

Habitat.—New Zealand.

On *Astelia*.

397. *Phenacoccus brunnitarsis* (Sign.).

Pseudococcus brunnitarsis Sign., Ann. Soc. Ent. Fr., (5), v, p. 332 (1875).

Phenacoccus " Ckll., Check List, p. 324 (1896).

Habitat.—The Maritime Alps.

On Borage.

398. *Phenacoccus casuarinæ* (Mask.).

Pseudococcus casuarinæ Mask., N. Z. Trans., xxv, p. 235 (1892).

Phenacoccus " Ckll., Check List, p. 325 (1896).

Habitat.—Australia.

On *Casuarina*.

399. *Phenacoccus cevalliæ* Ckll.

Phenacoccus cevalliæ Ckll., Can. Ent., xxxiv, p. 325 (1902).

Habitat.—New Mexico.

On *Cevallia sinuata*.

400. *Phenacoccus comari* (Künow).

Coccus comari Künow, Ent. Nach., vi, p. 46 (1880).

" " Dougl., Ent. Mon. Mag., xvii, p. 90 (1880).

Phenacoccus? *comari* Ckll., Am. Nat., xxxi, p. 589 (1897).

Habitat.—Germany.

On *Comarum palustre*.

401. *Phenacoccus dearnessi* King.

Phenacoccus dearnessi King, Can. Ent., xxxiii, p. 180 (1901).

Habitat.—Ontario, Can.

On hawthorn.

402. *Phenacoccus*(?) *farinosus* (Mod.).

Coccus (farinosus alni) De G., Mem. Ins., vi, p. 442, pl. 28, figs. 16, 17 (1776).

" " Mod., Act. Goth., p. 23 (1778).

" " Gmel., Syst. Nat., Ed. xiii, p. 2220 (1789).

" " Oliv., Ency. Meth., vi, p. 98 (1791).

" " Turton, Syst. Nat., p. 715 (1801).

?*Phenacoccus* " Ckll., Pr. Ac. N. Sci. Ph., p. 264 (1899).

Habitat.—Europe.

On alder.

403. *Phenacoccus glacialis* (Newst.).

Dactylopius glacialis Newst., Ent. Mon. Mag., xxxvi, p. 248 (1900).

Phenacoccus " Ckll., in litt. (1902).

Habitat.—Italy.—"Associated with ants."

404. *Phenacoccus gossypii* Towns. & Ckll.

Phenacoccus gossypii Towns. & Ckll., Jn. N. Y. Ent. Soc., vi, p. 170 (1898).

" *helianthi* var. *gossypii* Ckll., Check List, Suppl., p. 391 (1899).

Habitat.—Mexico.

"On cotton and other Malvaceous plants."

***Phenacoccus gossypii psidiarum* Ckll.**

Phenacoccus gossypii psidiarum Ckll., Ann. Mag. N. H., (7), xi, p. 164 (1903).

Habitat.—Mexico.

On wild guava.

405. *Phenacoccus hederæ* (Sign.).

Pseudococcus hederæ Sign., Ann. Soc. Ent. Fr., (5), v, p. 332 (1875).

Phenacoccus " Ckll., Ent. News, v, p. 210 (1894).

Habitat.—France; England.

On *Hedera*.

406. *Phenacoccus helianthi* (Ckll.).

Pseudococcus helianthi Ckll., The Entom., xxvi, p. 352 (1893).

Phenacoccus " " Can. Ent., xxvi, p. 285 (1894).

" " " The Entom., xxxiii, p. 86 (1900).

Habitat.—N. Mexico; Arizona.

On *Helianthus*.

407. *Phenacoccus mangiferæ* (Green).

Pseudococcus mangiferæ Green, Ind. Mus. Notes, iv, p. 6 (1896).

Phenacoccus " Ckll., Check List, p. 325 (1896).

Habitat.—Ceylon; India.

On *Mangifera indica*.

408. *Phenacoccus mespili* (Sign.).

Pseudococcus mespili Sign., Ann. Soc. Ent. Fr., (5), v, p. 333 (1875).

Phenacoccus " Ckll., Pr. Ac. N. Sci. Ph., p. 264 (1899).

Habitat.—Europe.

On Medlar.

409. *Phenacoccus minimus* Tins.

Phenacoccus minimus Tins., Can. Ent., xxx, p. 223 (1898).

Habitat.—Colorado.

On silver-spruce (*Picea pungens*).

410. *Phenacoccus nivalis* (Mask.).

Pseudococcus nivalis Mask., N. Z. Trans., xxv, p. 234 (1892).

Phenacoccus " Ckll., Check List, p. 325 (1896).

? " " de Charm., Pr. Soc. Amic. Scien., p. 42 (1899).

" " Ckll., The Entom., xxxiii, p. 86 (1900).

Habitat.—Australia; Mauritius.

On *Acacia*; *Solanum*.

411. *Phenacoccus osborni* Sanders.

Phenacoccus osborni Sanders., Ohio Nat., ii, p. 284 (1902).

Habitat.—Ohio.

On *Platanus occidentalis*.

412. *Phenacoccus pergandei* Ckll.

Phenacoccus pergandei Ckll., Psyche, vii, Suppl., i, p. 18 (1896).

" " " Bull. 4, T. s., Dep. Ag., p. 55 (1896).

" " " Kuw., Pr. Cal. Ac. Sci., (3), iii, p. 56 (1902).

Habitat.—Japan.

On "Gumi;" *Diospyros kaki*.

413. *Phenacoccus piceæ* (Loew).

Boisduvallia piceæ Loew, Wien. Ent. Zeit., ii, p. 267 (1883).

Oudablis " Ckll., Check List, p. 325 (1896).

Phenacoccus " " The Entom., xxxiii, pp. 86, 87 (1900).

Habitat.—Austria.

On *Abies excelsa*.

414. *Phenacoccus platani* (Sign.).

Pseudococcus platani Sign., Ann. Soc. Ent. Fr., (5), v, p. 334 (1875).

Phenacoccus " Ckll., Check List, p. 324 (1896).

Habitat.—France.

On *Platanus*.

415. *Phenacoccus quercus* (Dougl.).

Pseudococcus quercus Dougl., Ent. Mon. Mag., xxvi, p. 154 (1890).

Phenacoccus " Ckll., Check List, p. 324 (1896).

Habitat.—England.

On *Quercus robur*.

416. *Phenacoccus rubivorus* Ckll.

Phenacoccus rubivorus Ckll., Psyche, ix, p. 215 (1901).

Habitat.—New Mexico.

On roots of *Rubus strigosus*.

417. *Phenacoccus simplex* King.

Phenacoccus simplex King, Ent. News, xiii, p. 42 (1902).

Habitat.—California.

On Atriplex.

418. *Phenacoccus socius* (Newst.).

Pseudococcus socius Newst., Ent. Mon. Mag., xxviii, p. 144 (1892).

Phenacoccus " Ckll., The Entom., xxxiii, p. 87 (1900).

Pulvinaria ribesiae Dougl. (non Sign.), Ent. Mon. Mag., xxvi, p. 238 (1890).

“ “ “ “ “ “ “ xxviii, p. 219 (1892).

Habitat.—England.

On black currant.

419. *Phenacoccus solenopsis* Tins.

Phenacoccus solenopsis Tins., Can. Ent., xxx, pp. 47, 319 (1898).

Habitat.—New Mexico.

In nests of *Solenopsis geminata* Fab.

420. *Phenacoccus spiniferus* Hemp.

Phenacoccus spiniferus Hemp., Rev. Mus. Paul., iv, p. 389 (1900).

“ “ “ Ann. Mag. N. H., (7), vii, p. 110 (1901).

Habitat.—Brazil.

421. *Phenacoccus stachyos* Ehrh.

Phenacoccus stachyos Ehrh., Can. Ent., xxxii, p. 314 (1900).

Habitat.—California.

On *Stachyos bullata*.

422. *Phenacoccus ulicis* (Dougl.).

Pseudococcus ulicis Dougl., Ent. Mon. Mag., xxv, p. 88 (1888).

Phenacoccus " Ckll., Check List, p. 325 (1896).

Pseudococcus " Newst., Jn. Roy. Hor. Soc., xxiii, p. 29 (1900).

Habitat.—Europe.

On Furze; Laburnum.

423. *Phenacoccus ulmi* (Dougl.).

Pseudococcus ulmi Dougl., Ent. Mon. Mag., xxv, p. 124 (1888).

Phenacoccus " Ckll., Check List, p. 325 (1896).

Habitat.—Europe.

On *Ulmus campestris*.

424. Phenacoccus wilmattæ Ckll.

Phenacoccus wilmattæ Ckll., Ann. Mag. N. H., (7), viii, p. 57 (1901).

Habitat.—New Mexico.

On "Viola aff. pedatifida."

Genus **TETRURA** Licht. Type, rubi.

Tetrura Licht., Ent. Mon. Mag., xviii, p. 275 (1882); Wien. Ent. Zeit., i, p. 124 (1882); Bull. Soc. Ent. Fr., (6), ii, p. lxxv (1882).

425. Tetrura rubi Licht.

Tetrura rubi Licht., Ent. Mon. Mag., xviii, p. 275 (1882).

" " " Wien. Ent. Zeit., i, p. 124 (1882).

Oudablis " Ckll., Check List, p. 325 (1896).

Tetrura " " The Entom., xxxiii, p. 86 (1900).

Habitat.—Europe.

On *Rubus discolor*.

Genus **CEROPUTO** Sulc. Type, pilosellæ.

Ceroputo Sulc, Sitzb. K. Bohm. Ges. Wiss., No. lxvi (1897): Ckll., Can. Ent., xxxi, p. 278 (1899).

426. Ceroputo bahiæ (Ehrh.).

Phenacoccus bahiæ Ehrh., Can. Ent., xxxii, p. 315 (1900).

Ceroputo " Ckll., Pr. Biol. Soc. Wash., xiv, p. 166 (1901).

Habitat.—California.

On Bahia.

427. Ceroputo barberi (Ckll.).

Phenacoccus yuccæ var. *barberi* Ckll., Ann. Mag. N. H., (6), xvi, p. 61 (1895).

" " " " Bull. 4, T. s., Dep. Ag., p. 39 (1896).

Ceroputo barberi Ckll., Pr. Biol. Soc. Wash., xiv, p. 166 (1901).

Habitat.—Antigua; New Mexico.

On *Thunbergia grandiflora*; *Allamanda*; *Coleus*; *Croton*.

428. Ceroputo calcitectus (Ckll.).

Phenacoccus calcitectus Ckll., Ann. Mag. N. H., (7), vii, p. 334 (1901).

Ceroputo " " Pr. Biol. Soc. Wash., xiv, p. 166 (1901).

Habitat.—New Mexico.

On grass.

429. Ceroputo lasiorum Ckll.

Ceroputo lasiorum Ckll., Pr. Biol. Soc. Wash., xiv, p. 166 (1901).

Habitat.—New Mexico.

In nests of *Lasius interjectus* under rocks.

430. Ceroputo orthezioides Ckll.

Ceroputo orthezioides Ckll., Ann. Mag. N. H., (7), xi, p. 163 (1903).

Habitat.—Mexico.

"On roots of dockweed."

431. Ceroputo pilosellæ (Sulc).

Dactylopius pilosellæ Sulc, Sitzb. K. Böhm. Ges. Wiss., pp. 1, 16, 18 (1897).

Ceroputo " Ckll., Check List, Suppl., p. 392 (1899).

Habitat.—Europe.

432. Ceroputo yuccæ (Coq.).

Pseudococcus yuccæ Coq., West Amer. Scientist, vii, p. 44 (1890).

" " Riley & How., Ins. Life, vi, p. 40 (1893).

" " Towns., Bull. 4, T. s., Dep. Ag., p. 12 (1896).

Phenacoccus " Ckll., Check List, p. 325 (1896).

Ceroputo " " Pr. Biol. Soc. Wash., xiv, p. 166 (1901).

Habitat.—Mexico; California; Antigua.

On *Yucca whipplei*; *Y. filifera*; *Y. australis*; *Lantana*; *Mimulus glutinosus*; *Ceanothus oliganthus*; banana; orange; lime. Full list in Bull. 4, T. s., Div. Ent. Dep. Ag., p. 12 (1896).

Ceroputo yuccæ mexicanus (Ckll.).

Dactylopius yuccæ var. *mexicanus* Ckll., Ann. Mag. N. H., (6), xii, p. 49 (1893).

Ceroputo yuccæ mexicanus Ckll., Pr. Biol. Soc. Wash., xiv, p. 166 (1901).

Habitat.—Mexico.

Ceroputo yuccæ ceanothi Ckll.

Ceroputo yuccæ var. *ceanothi* Ckll., Ann. Mag. N. H., (7), xi, p. 163 (1903).

Habitat.—California.

On *Ceanothus oliganthus*.

Genus TYLOCOCCUS Newst. Type, *madagascariensis*.

Tylococcus Newst., Ent. Mon. Mag., xxxiii, p. 165 (1897); Ckll., Can. Ent., xxxi, p. 278 (1899).

433. Tylococcus madagascariensis Newst.

Tylococcus madagascariensis Newst., Ent. Mon. Mag., xxxiii, p. 166 (1897).

Habitat.—Madagascar.

In nests of *Cremastogaster schencki* For.

Genus LACHNODIUS Mask. Type, *eucalypti*.

Lachnodius Mask., N. Z. Trans., xxviii, p. 400 (1896); Ckll., Can. Ent., xxxi, p. 278 (1899).

434. Lachnodius eucalypti (Mask.).

Dactylopius eucalypti Mask., N. Z. Trans., xxiv, p. 35 (1891).

" " " " " xxv, p. 233 (1892).

" " " " " xxvii, p. 65 (1894).

Lachnodius " " " " " xxviii, p. 400 (1896).

Habitat.—Australia.

On *Eucalyptus robusta*; *E. rostrata*; *E. siderophloia*.

435. Lachnodius hirtus Mask.

Lachnodius hirtus Mask., N. Z. Trans., xxviii, p. 402 (1896).

Habitat.—Australia.

On *Acacia*.

436. Lachnodius lectularius Mask.

Lachnodius lectularius Mask., N. Z. Trans., xxviii, p. 400 (1896).

Habitat.—Australia.

On *Eucalyptus rostrata*.

Genus **TRIONYMUS** Berg. Type, *perrisii*.

|| *Westwoodia* Sign., Ann. Soc. Ent. Fr., (5), v, p. 337 (1875).

|| *Signoretia* Kraatz, Deutsch. Ent. Zeit., p. 176 (1888).

|| *Bergrothia* “ “ “ “ p. 360 (1888).

|| *Bergrothiella* Reitter, Wien. Ent. Zeit., xvii, p. 54 (1898).

Trionymus Berg, Commun. Mus. Buen. Aires, May 24 (1899): Ckll., Ent. News, xii, p. 89 (1901).

Pergandiella Ckll., Pr. Ac. N. Sci. Ph., p. 266 (1899).

437. Trionymus americanus (Ckll.).

Pergandiella americana Ckll., Pr. Ac. N. Sci. Ph., p. 266 (1899).

Habitat.—Washington, D. C.

On ash.

438. Trionymus perrisii (Sign.).

Westwoodia perrisii Sign., Ann. Soc. Ent. Fr., (5), v, p. 337 (1875).

Dactylopius “ Ckll., Check List, p. 325 (1896).

Pergandiella “ “ Pr. Ac. N. Sci. Ph., p. 266 (1899).

Habitat.—France.

On *Sphagnum*; *Agropyrum*; *Calamagrostis arundinacea*.

Genus **PSEUDOCOCCUS** Westw. Type, *longispinus*.

Pseudococcus Westw., Synop. Gen. Br. Ins., p. 118 (1839); Arc. Ent., i, p. 21 (1841): Ckll. Can., Ent., xxxi, p. 277 (1899); Ann. Mag. N. H., (7), ix, p. 454 (1902).

Trechocorys Curt., Gard. Chron., p. 444 (1843).

Cocconidia Amy., Ann. Soc. Ent. Fr., (2), v, p. 494 (1847).

Dactylopius Targ., Mem. Soc. Ent. Ital., (1867); Intr. 2nd Mem. sul. Cocc. (1869): Sign., Ann. Soc. Ent. Fr., (5), v, p. 308 (1875); Comst., Rep. U. S.

Dep. Ag., 1880, p. 341 (1881); Mask., Ins. Nox. Agr. N. Z., p. 99 (1887);

Targ., Coccin. deg. Agr. Ital., p. 6 (1891); Mask., Ann. Mag. N. H., (6), xvi, p. 129 (1895); Ckll., Can. Ent., xxxi, p. 278 (1899).

|| *Boisduvallia* Sign., Ann. Soc. Ent. Fr., (5), v, p. 338 (1875).

Oudablis Sign., Bull. Soc. Ent. Fr., (6), i, p. clvii (1881).

439. *Pseudococcus acaciæ* (Mask.).

Dactylopius acaciæ Mask., N. Z. Trans., xxiv, p. 33 (1891).

Habitat.—Australia.

On *Acacia linearis*; *A. lophantha*.

440. *Pseudococcus affinis* (Mask.).

Dactylopius affinis Mask., N. Z. Trans., xxvi, p. 90 (1893).

“ “ Lidg., *The Wombat*, iii, p. 90 (1898).

Habitat.—Australia.

On tubers of *Dahlia* and potato.

441. *Pseudococcus alaterni* (Sign.).

Dactylopius alaterni Sign., Ann. Soc. Ent. Fr., (5), v, p. 309 (1875).

Habitat.—Europe.

On *Rhamnus alaternus*.

442. *Pseudococcus albizziæ* (Mask.).

Dactylopius albizziæ Mask., N. Z. Trans., xxiv, p. 31 (1891).

“ “ Lidg., *The Wombat*, iii, p. 89 (1898).

“ “ Frog., Ag. Gaz. N. S. W., July, p. 19 (1902).

Pseudococcus “ Kirkaldy, *Fauna Haw.*, iii, pt. 2, p. 103 (1902).

Habitat.—Australia; Sandwich Islands.

On *Albizzia lophantha*; *Acacia dealbata*; *A. discolor*; *A. baileyana*; orange.

443. *Pseudococcus alpinus* (Mask.).

Dactylopius alpinus Mask., N. Z. Trans., xvi, p. 138 (1883).

“ “ “ Ins. Nox. Agr. N. Z., p. 99 (1887).

Habitat.—New Zealand; Southern Alps.

On *Veronica*.

444. *Pseudococcus aphyllonis* (Ckll.).

Dactylopius aphyllonis Ckll., *Psyche*, vii, Suppl., i, p. 8 (1895).

Habitat.—Washington.

On *Aphyllon fasciculatum*.

445. *Pseudococcus arecæ* (Mask.).

Dactylopius arecæ Mask., N. Z. Trans., xxii, p. 150 (1889).

“ “ “ “ “ xxv, p. 231 (1892).

“ “ Ckll., *Can. Ent.*, xxvi, p. 287 (1894).

Habitat.—New Zealand.

On *Areca sapida*; grass; red clover; gooseberry; dock; palm.

446. *Pseudococcus aurilanatus* (Mask.).

Dactylopius aurilanatus Mask., N. Z. Trans., xxii, p. 151 (1889).

“ “ Craw, 5th Bien. Rep. Cal. Bd. Hort., p. 45 (1896).

“ “ Mask., N. Z. Trans., xxix, p. 320 (1896).

“ “ Frog., Dep. Ag. N. S. W., No. 175, p. 4 (1897).

Dactylopius aurilanus Full., 1st Rep. Ent. Natal, p. 105 (1901).

Habitat.—New Zealand ; Australia ; Auckland ; Natal ; California.

On *Araucaria bidwillii*; *A. excelsa*; *Dammara ovata*; *D. vitiensis*.

447. *Pseudococcus australiensis* (Green & Lidg.).

Dactylopius australiensis Green & Lidg., Victorian Naturalist, xvii, p. 13 (1900).

Habitat.—Australia.

448. *Pseudococcus azaleæ* (Tins.).

Dactylopius azaleæ Tins., Can. Ent., xxx, p. 319 (1898).

Habitat.—California.

On Azalea, in Japanese nursery.

449. *Pseudococcus brevipes* (Ckll.).

Dactylopius brevipes Ckll., The Entom., xxvi, p. 267 (1893).

“ “ “ Bull. Bot. Dep. Jam., No. 46, p. 3 (1893).

Habitat.—Jamaica.

On pineapple.

450. *Pseudococcus bromeliæ* (Bouché).

Lecanium bromeliae Bouché, Schäd. Gart. Ins., p. 49 (1833).

“ “ “ Naturg. Ins., p. 20 (1834).

“ “ Burm., Handb. Ent., i, p. 70 (1835).

“ Curt., Gard. Chron., p. 131 (1841).

Aspidiotus " Bouché, Stett. Ent. Zeit., v, p. 295 (1844).

Dactylopius " Sign., Ann. Soc. Ent. Fr., (5), v, p. 310 (1875).

Lecanium " " " " " " " vi, p. 610 (1876).

Dactylopius " Mask., N. Z. Trans., xxvi, p. 88 (1893).

“ “ Cotes, *Ind. Mus. Notes*, iii, No. 5, p. 51 (1894).

“ Tryon, Queensland Agr. Journ., viii, p. 297 (1901).

Habitat.—India; S. Africa; Zanzibar; S. America?; Mass.

On mulberry ; Canna ; Hibiscus ; pine-apple.

451. *Pseudococcus calceolariae* (Mask.).

Dactylopius calceolariae Mask., N. Z. Trans., xi, p. 218 (1878).

“ “ “ “ “ xvi, p. 138 (1883).

“ “ “ Ins. Nox. Agr. N. Z., p. 100 (1887).

“ Ckl., Bull. Bot. Dep. Jam., No. 46, p. 3 (1893).

“ Mask., N. Z. Trans., xxvi, p. 89 (1893).

“ “ “ The Entom., xxvii, p. 46 (1894).

“ Ckll., Pr. Ac. Nat. Sci. Ph., p. 265 (1899).

Pseudococcus " Kirkaldy, Fauna Haw., iii, pt. 2, p. 103 (1902).

Habitat.—New Zealand; Sandwich Islands; Fiji Islands; Jamaica; Florida.

On *Calceolaria*; *Danthonia*; *Phormium tenax*; *Cordyline australis*;
sugar-cane.

Pseudococcus calceolariae minor (Mask.).

Dactylopius calceolariae var. *minor* Mask., N. Z. Trans., xxix, p. 332 (1896).

" " " de Charm., Pr. Soc. Amic. Scien., p. 44

(1899).

Habitat.—Mauritius.

On "roots of onion grass."

452. Pseudococcus caricus (Genn.).

Dactylopius caricus Genn., Ann. Soc. Ent. Fr., (6), iii, p. 31 (1883).

Habitat.—Asia Minor.

On *Pinus taurica*.

453. Pseudococcus ceratoniae (Sign.).

Dactylopius ceratoniae Sign., Ann. Soc. Ent. Fr., (5), v, p. 311 (1875).

Habitat.—Maritime Alps.

On bark of Carob tree.

454. Pseudococcus citri (Risso).

(*Common Mealy bug.*)

Dorthesia citri Risso, Essai, Hist. Nat. des Oranges (1813).

Coccus " Bdv., Ent. Hort., p. 348 (1867).

Dactylopius " Sign., Ann. Soc. Ent. Fr., (5), v, p. 312 (1875).

Lecanium phyllococcus Ashm., Can. Ent., xi, p. 160 (1879).

Dactylopius brevispinus Targ., Annali di Agr., p. 137 (1881).

" destructor Comst., Rep. U. S. Dep. Ag., 1880, p. 342 (1881).

" " " 2nd Rep. Dep. Ent. Corn. Univ., p. 131 (1883).

" " Saund., Ins. Inj. to Fruits, p. 411 (1883).

" citri Sign., Bull. Soc. Ent. Fr., (6), iv, pp. cl, cli (1884).

" destructor Dougl., Ent. Mon. Mag., xxiii, p. 154 (1886).

" " Comst., Intr. Ent., p. 138 (1888).

" citri Riley, Ins. Life, i, p. 118 (1888).

" " Berl., Riv. Pat. Veg., i, pp. 60, 65 (1892).

" " " " " ii, pp. 74, 75 (1893).

" " Ckll., The Entom., xxvi, p. 267 (1893).

" " Journ. Inst. Jam., i, p. 309 (1893).

" " Bull. Bot. Dep. Jam., No. 46, p. 3 (1893).

" destructor Morg., Spec. Bull. La. Exp. Sta., p. 63 (1893).

" " Ins. Life, vii, p. 168 (1894).

" citri Visart, Riv. Pat. Veg., iii, p. 40 (1894).

" " Saccardo, " " iv, p. 46 (1895).

" " Luggier, Bull. 43, Minn. Exp. Sta., p. 221 (1895).

" " Rep. Minn. Exp. Sta., p. 25 (1895).

" " Comst., Man. Ins., p. 167 (1895).

" destructor Dougl., Ent. Mon. Mag., xxxi, p. 138 (1895).

" " Lounsb., Rep. Ent. Cape Good Hope, p. 7 (1896).

" citri Davis, Spec. Bull. 2, Mich. Exp. Sta., p. 25 (1896).

" " Lounsb., Rep. Ent. Cape Good Hope, p. 93 (1896).

Dactylopius citri Green, Ent. Mon. Mag., xxxiii, p. 73 (1897).

" " Osborn, Contr. Ia. Ag. Coll., No. 3, p. 2 (1898).

" " Berl. e Leon., Annali di Agr., p. 46 (1898).

" " " " Riv. Pat. Veg., vi, p. 324 (1898).

" " How., Yearbook U. S. Dep. Ag., p. 143 (1898).

" " Rolfs & Quaint., Cocc. Amer., Dec. i-ii, No. 1 (1898).

" " King, Can. Ent., xxxi, p. 111, (1899).

" " de Charm., Pr. Soc. Amic. Scien., p. 45 (1899).

" " Ckll., Bull. 32, Ariz. Exp. Sta., p. 285 (1899).

" destructor Newell, Bull. 43, Ia. Exp. Sta., p. 172 (1899).

" " Lugger, 6th Rep. Ent. Minn. Exp. Sta., p. 211 (1900).

" citri Gossard, Bull. 51, Fla. Exp. Sta., p. 120 (1900).

" " Lugger, 6th Rep. Ent. Minn. Exp. Sta., p. 212 (1900).

" " Hemp., Rev. Mus. Paul., iv, p. 384 (1900).

" " Marlatt, Yearbook U. S. Dep. Ag., p. 282 (1900).

" " Newst., Jn. Roy. Hor. Soc., xxiii, p. 27 (1900).

Habitat.—Europe; Sandwich Islands; Mauritius; Brazil; Jamaica; Can.; Mass.; N. Y.; N. J.; La.; Fla.

On orange; lemon; citron; coffee; tobacco; cotton; ivy; peony; Ipomœa; Solanum jasminoides; Callistemon lanceolatus; Habrothamnus and many other plants.

455. *Pseudococcus claviger* (King & Tins.).

Dactylopius claviger King & Tins., Psyche, viii, p. 150 (1897).

" " " " Can. Ent., xxxi, p. 111 (1899).

Habitat.—Mass.

In nests of *Lasius claviger* and *L. americanus*.

456. *Pseudococcus cockerelli* (King & Tins.).

Dactylopius cockerelli King & Tins., Psyche, viii, p. 297 (1898).

" " " " King, Can. Ent., xxxi, p. 112 (1899).

Habitat.—Andover, Mass.

In nests of ants.

457. *Pseudococcus cocotis* (Mask.).

Dactylopius cocotis Mask., N. Z. Trans., xxii, p. 149 (1889).

" " " " " " xxiv, p. 34 (1891).

" " " " " " Cotes, Ind. Mus. Notes, ii, p. 169 (1893).

" " " " " " Mask., " " " " iii, No. i, p. 66 (1893).

" " " " " " Ent. Mon. Mag., xxxiii, p. 244 (1897).

Habitat.—China; Fiji; Laccadive Islands.

On Cocoanut; Hibiscus.

458. *Pseudococcus comstocki* (Kuwana).

Dactylopius comstocki Kuw., Pr. Cal. Ac. Sci., (3), iii, p. 52 (1902).

Habitat.—Japan.

On mulberry-tree; maple.

459. *Pseudococcus crawii* (Coq.).

Dactylopius crawii Coq., West Amer. Scientist, vi, p. 123 (1889).

Habitat.—California.

On wild sage.

460. *Pseudococcus cualatensis* Ckll.

Pseudococcus cualatensis Ckll., The Entom., xxxvi, p. 47 (1903).

Habitat.—Mexico.

461. *Pseudococcus cyperi* (Sign.).

Dactylopius cyperi Sign., Ann. Soc. Ent. Fr., (5), v, p. 314 (1875).

Habitat.—France.

462. *Pseudococcus dasyliirii* (Ckll.).

Dactylopius dasyliirii Ckll., Jn. N. Y. Ent. Soc., iv, p. 202 (1896).

Habitat.—N. Mexico.

On *Dasyliirion wheeleri*.

463. *Pseudococcus edgeworthiæ* (Ckll.).

Dactylopius edgeworthiæ Ckll., Am. Nat., xxxi, p. 589 (1897).

Habitat.—Japan.

On *Edgeworthia papyrifera*.

464. *Pseudococcus ephedræ* (Coq.).

Dactylopius ephedræ Cq., West Amer. Scientist, vii, p. 43 (1890).

Habitat.—California.

On *Ephedra californica*.

465. *Pseudococcus ericicola* (Mask.).

Dactylopius ericicola Mask., N. Z. Trans., xxv, p. 232 (1892).

Habitat.—Australia.

On *Erica autumnalis*.

466. *Pseudococcus farnesianæ* (Targ.).

Dactylopius farnesianæ Targ., Annali di Agr., p. 436 (1888).

“ “ Tins., Can. Ent., xxxii, p. 66 (1900).

Habitat.—Italy.

On *Acacia farnesiana*.

467. *Pseudococcus ficus* (Sign.).

Dactylopius ficus Sign., Ann. Soc. Ent. Fr., (5), v, p. 315 (1875).

Habitat.—France.

On fig.

468. *Pseudococcus filamentosus* (Ckll.).

Dactylopius filamentosus Ckll., The Entom., xxvi, p. 268 (1893).

“ “ “ Bull. Bot. Dep. Jam., No. 46, p. 4 (1893).

“ *vastator* Mask., N. Z. Trans., xxvii, p. 74 (1894).

“ “ Ckll., Ann. Mag. N. H., (6), xvi, p. 133 (1895).

- Dactylopius vastator* Newst., Ent. Mon. Mag., xxxi, p. 236 (1895).
 " " de Charm., Pr. Soc. Amic. Scien., p. 45 (1899).
 " filamentosus Ckll., Can. Ent., xxxi, p. 267 (1899).
 " " Tins., " " xxxii, p. 64 (1900).

Pseudococcus vastator Kirkaldy, Fauna Haw., iii, pt. 2, p. 103 (1902).

Habitat.—S. Caicos Island; Jamaica; Mauritius; Sandwich Islands Japan.

On "a plant allied to *Vaccinium*"; *Citrus*.

469. *Pseudococcus formicarii* (Ehrh.).

Dactylopius formicarii Ehrh., Can. Ent., xxxi, p. 6 (1899).

Habitat.—Arizona.

In nests of ants on roots of *Artemisia*.

470. *Pseudococcus formiceticola* (Newst.).

|| *Dactylopius formicarius* Newst., Ent. Mon. Mag., xxxvi, p. 249 (1900).

" " formiceticola " " " " xxxvii, p. 86 (1901).

Habitat.—Konkan, India.

In nests of *Cremastogaster*.

471. *Pseudococcus glaucus* (Mask.).

Dactylopius glaucus Mask., N. Z. Trans., xi, p. 219 (1878).

" " " " " xvi, p. 134 (1883).

" " " " " xvii, p. 30 (1884).

" " " Ins. Nox. Ag. N. Z., p. 100 (1887).

" " Ckll., Gard. Chron., (3), xiii, p. 548 (1893).

Habitat.—New Zealand.

On *Panax*; *Rubus*; *Coprosma*; *Pittosporum*; *Piper excelsum*.

472. *Pseudococcus graminis* (Mask.).

Dactylopius graminis Mask., N. Z. Trans., xxiv, p. 36 (1891).

" " Newst., Ent. Mon. Mag., xxxi, p. 167 (1895).

Habitat.—South Africa.

On grass.

***Pseudococcus graminis orientalis* (Mask.).**

Dactylopius graminis var. *orientalis* Mask., N. Z. Trans., xxx, p. 245 (1897).

Habitat.—China.

473. *Pseudococcus grandis* (Hemp.).

Dactylopius grandis Hemp., Rev. Mus. Paul., iv, p. 384 (1900).

" " " Ann. Mag. N. H., (7), vi, p. 395 (1900).

Habitat.—Brazil.

On Myrtaceæ.

474. *Pseudococcus grevilleæ* (Full.).

Dactylopius grevilleæ Full., Tr. Ent. Soc. Lond., p. 454 (1899).

Habitat.—W. Australia.

On *Grevillea bipinnatifida*.

475. *Pseudococcus gutierreziae* (Ckll.).

Dactylopius gutierreziae Ckll., Jn. N. Y. Ent. Soc., iv, p. 203 (1896).

Habitat.—New Mexico.

On *Gutierrezia sarothrae* var.

476. *Pseudococcus herbicola* (Mask.).

Dactylopius herbicola Mask., Agr. Gaz. N. S. W., ii, p. 352 (1891).

“ “ “ N. Z. Trans., xxiv, p. 36 (1891).

“ “ Ckll., Ann. Mag. N. H., (6), xvi, p. 134 (1895).

Habitat.—Australia.

On grass.

477. *Pseudococcus hibbertiae* (Mask.).

Dactylopius hibbertiae Mask., N. Z. Trans., xxiv, p. 32 (1891).

“ “ Ckll., Ann. Mag. N. H., (6), xvi, p. 134 (1895).

Habitat.—Australia.

On *Hibbertia linearis*; *H. virgata*.

478. *Pseudococcus hibernicus* (Newst.).

Dactylopius hibernicus Newst., Ent. Mon. Mag., xxxi, p. 167 (1895).

Habitat.—Ireland.

On grass.

479. *Pseudococcus hirsutus* (Newst.).

Dactylopius hirsutus Newst., Ent. Mon. Mag., xxxiii, p. 166 (1897).

Habitat.—India.

In nests of *Cremastogaster*.

480. *Pseudococcus hoyae* (Sign.).

Dactylopius hoyae Sign., Ann. Soc. Ent. Fr., (5), v, p. 317 (1875).

Habitat.—France.

On *Hoya carnosa* from Western Asia.

481. *Pseudococcus hymenocleae* (Ckll.).

Dactylopius hymenocleae Ckll., Can. Ent., xxxi, p. 267 (1899).

Habitat.—Arizona.

On *Hymenoclea monogyra*.

482. *Pseudococcus iceryoides* (Mask.).

Dactylopius iceryoides Mask., N. Z. Trans., xxiv, p. 33 (1891).

“ “ Riley & How., Ins. Life, v, p. 282 (1893).

“ “ Ckll., Can. Ent., xxvi, p. 34 (1894).

Habitat.—New Zealand; California from Australia.

On *Fagus fusca*.

483. *Pseudococcus indicus* (Sign.).

Dactylopius indicus Sign., Ann. Soc. Ent. Fr., (5), v, p. 317 (1875).

Habitat.—France.

On *Laurus indicus*.

484. *Pseudococcus kraunhiæ* (Kuwana).

Dactylopius kraunhiæ Kuw., Pr. Cal. Ac. Sci., (3), iii, p. 55 (1902).

Habitat.—Japan.

On *Kraunhia floribunda*.

485. *Pseudococcus lanigerus* (Full.).

Dactylopius lanigerus Full., Notes on Cocc. W. Austr., p. 10 (1897).

“ “ “ Tr. Ent. Soc. Lond., p. 454 (1899).

• Habitat.—West Australia.

On *Acacia pulchella*.

486. *Pseudococcus laurinus* (Bdv.).

Coccus laurinus Bdv., Ent. Hort., p. 353 (1869).

Boisduvalia lauri Sign., Ann. Soc. Ent. Fr., (5), v, p. 338 (1875).

Oudablis “ Ckll., Check List, p. 325 (1896).

“ “ “ The Entom., xxxiii, p. 85 (1900).

Habitat.—France.

On laurel.

487. *Pseudococcus lavandulae* (Sign.).

Dactylopius lavandulae Sign., Ann. Soc. Ent. Fr., (5), v, p. 318 (1875).

“ “ “ Ckll., Can. Ent., xxvi, p. 287 (1894).

Habitat.—Europe.

On *Lavandula stœchas*.

488. *Pseudococcus liliacearum* (Bouché).

Coccus liliacearum Bouché, Stett. Ent. Zeit. p. 300 (1844).

Dactylopius “ Sign., Ann. Soc. Ent. Fr., (5), v, p. 319 (1875).

Habitat.—S. America.

On Liliaceæ.

489. *Pseudococcus lobulatus* (Mask.).

Dactylopius lobulatus Mask., N. Z. Trans., xxvi, p. 91 (1893).

“ “ “ Ckll., Ann. Mag. N. H., (6), xvi, p. 133 (1895).

Habitat.—Australia.

On bark of *Eucalyptus globulus*.

490. *Pseudococcus longispinus* (Targ.).

(*Mealy bug*)

Coccus adonidum corpore roseo, etc., Geoff., Abr. Ins., i, p. 511 (1762).

|| “ “ Fourc., Ent. Paris., p. 231 (1785).

“ “ Oliv., Ency. Meth., vi, p. 94 (1791).

“ “ Major, Treat. Ins., pp. 120, 144, 240, 241 (1829) (*Mealy-bug*).

“ “ Burm., Handb. Ent., ii, p. 74 (1835).

Pseudococcus adonidum Westw., Mod. Class. Ins., i, Synop., p. 118 (1839).

Coccus “ Blanch., Hist. Nat. Ins., iii, p. 213 (1840).

“ “ Koll., Inj. Ins., p. 178 (1840).

“ “ Targ., Studii sul. Cocc., pp. 18, 19, 58 (1867).

- Dactylopius longispinus* Targ., Catalogue, p. 32 (1869).
 “ adonidum “ “ p. 32 (1869).
Coccus “ Riley, 3rd Rep. Ins. Mo., p. 96 (1871).
 “ “ “ 5th “ “ “ p. 80 (1873).
Dactylopius longispinus “ 6th “ “ “ p. 63 (1874).
 “ adonidum Sign., Ann. Soc. Ent. Fr., (5), v, p. 306 (1875).
 “ pteridis “ “ “ “ “ “ p. 321 (1875).
 “ adonidum Licht., Bull. “ “ “ “ vi, p. lxiv (1876).
 “ “ Comst., Rep. U. S. Dep. Ag., 1880, p. 341 (1881).
 “ longifilis “ “ “ “ “ p. 344 (1881).
 “ longispinus Targ., Annali di Agr., p. 136 (1881).
 “ adonidum Comst., 2nd Rep. Dep. Ent. Corn. Univ., p. 131 (1883).
 “ longifilis Saund., Ins. Inj. to Fruits, p. 412 (1883).
 “ “ Targ., Annali di Agr., p. 401 (1884).
 “ “ Lint., 2nd Rep. Ins. N. Y., p. 56 (1885).
 “ “ Comst., Intr. to Ent., p. 138 (1888).
 “ adonidum Dougl., Ent. Mon. Mag., xxv, p. 314 (1889).
 “ “ Atk., Ind. Mus. Notes, i, p. 6 (1889).
Pseudococcus “ Cotes, “ “ “ ii, p. 168 (1893).
Dactylopius longispinus Berl., Riv. Pat. Veg., ii, p. 130 (1893).
 “ longifilis Ckll., Bull. Bot. Dep. Jam., No. 46, p. 3 (1893).
 “ “ “ The Entom., xxvi, p. 266 (1893).
 “ “ Davis, Ins. Life, vii, p. 170 (1894).
 “ adonidum Mask., The Entom., xxvii, p. 46 (1894).
 “ “ Craw, 4th Bien. Rep. Cal. Bd. Hort., p. 97 (1894).
 “ “ Mask., N. Z. Trans., xxviii, p. 399 (1895).
 “ longispinus Ckll., Ann. Mag. N. H., (6), xvi, p. 61 (1895).
 “ “ Davis, Spec. Bull. 2, Mich. Exp. Sta., p. 27 (1896).
 “ longifilis Barlow, Ind. Mus. Notes, iv, p. 75 (1897).
 “ longispinus Green, Ent. Mon. Mag., xxxiii, p. 73 (1897).
 “ “ Berl. e Leon., Cherm. Ital., Fasc., iii, No. 75 (1898).
 “ “ Osborn, Contr. Ia. Ag. Coll., p. 2 (1898).
 “ longifilis Newst., Ent. Mon. Mag., xxxiv, p. 98 (1898).
 “ “ Newell, Bull. 43, Ia. Exp. Sta., p. 172 (1899).
 “ adonidum de Charm., Pr. Soc. Amic. Scien., p. 46 (1899).
 “ pteridis “ “ “ “ “ “ p. 46 (1899).
 “ longispinus Ckll., Am. Nat., xxxiii, p. 900 (1899).
 “ adonidum “ Pr. Ac. N. Sci. Ph., p. 261 (1899).
 “ longifilis Lugger, 6th Rep. Minn. Exp. Sta., p. 211 (1900).
 “ longispinus Newst., Jn. Roy. Hor. Soc., xxiii, p. 29 (1900).
Pseudococcus adonidum Kirkaldy, Fauna Haw., iii, pt. 2, p. 103 (1902).
 Habitat.—Europe; New Zealand; Mauritius; Chili; Jamaica; U. S.
 On ferns; mango; guava; fig; plum; Croton; *Cycas revoluta*; *Flacourtia sepiaria*; *Nephrodium amplum*; *Stangeria schizodon*.

491. *Pseudococcus luffi* (Newst.).

Dactylopius luffi Newst., Ent. Mon. Mag., xxxvii, p. 85 (1901).

Habitat.—England.

On roots of *Lepigonum rupestre*.

492. *Pseudococcus macrozamiæ* (Full.).

Dactylopius macrozamiæ Full., Notes on Cocc. W. Austr., p. 10 (1897).

“ “ “ Tr. Ent. Soc. Lond., p. 454 (1899).

Habitat.—W. Australia.

On *Macrozamia frazeri*.

493. *Pseudococcus magnolicida* (“von Iher.,” King).

Dactylopius magnolicida “von Iher.,” King, Rev. Mus. Paul., v, p. 616 (1902).

Habitat.—Brazil.

494. *Pseudococcus mamillariæ* (Bouché).

Coccus mamillariæ Bouché, Stett. Ent. Zeit., v, p. 302 (1844).

“ “ Bdv., Ent. Hort., p. 353 (1867).

Dactylopius “ Sign., Ann. Soc. Ent. Fr., (5), v, p. 320 (1875).

Habitat.—France ; Central America.

On *Mamillaria* ; *Cactus*.

495. *Pseudococcus maritimus* (Ehrh.).

Dactylopius maritimus Ehrh., Can. Ent., xxxii, p. 315 (1900).

Habitat.—California.

On *Eriogonum latifolium*.

496. *Pseudococcus neomexicanus* (Tins.).

Dactylopius kingii var. *neomexicanus* Tins., Can. Ent., xxx, p. 318 (1898).

“ *neomexicanus* Ckll., Ann. Mag. N. H., (7), vii, p. 334 (1901).

Habitat.—New Mexico.

On roots of *Gutierrezia sarothræ*.

***Pseudococcus neomexicanus alkalinus* Ckll.**

Pseudococcus neomexicanus var. *alkalinus* Ckll., Can. Ent., xxxiv, p. 315 (1902).

Habitat.—New Mexico.

On grass.

***Pseudococcus neomexicanus indecisis* (Ckll.).**

Dactylopius neomexicanus var. *indecisis* Ckll., Can. Ent., xxxiii, p. 209 (1901).

Habitat.—New Mexico.

In nests of *Lasius americanus*.

***Pseudococcus neomexicanus* var. B. (Ckll.).**

Dactylopius neomexicanus var. B. Ckll., Ann. Mag. N. H., (7), ix, p. 22 (1902).

Habitat.—New Mexico.

On *Erigeron*.

497. *Pseudococcus nipæ* (Mask.).

- Dactylopius nipæ* Mask., N. Z. Trans., xxv, p. 232 (1892).
 " " Newst., Ent. Mon. Mag., xxix, p. 187 (1893).
 " " Mask., N. Z. Trans., xxvi, p. 88 (1893).
 " " " The Entom., xxvii, p. 45 (1894).
 " " King, Can. Ent., xxxiv, p. 59 (1902).

Habitat.—Demerara; Mexico; Mass.

On *Nipa fruticans*; palms.

498. *Pseudococcus nubicola* (Mask.).

- Dactylopius nubicola* Mask., Ag. Gaz. N. S. W., ii, p. 352 (1891).

Habitat.—N. S. Wales.

On grass.

499. *Pseudococcus obtectus* (Mask.).

- Dactylopius obtectus* Mask., N. Z. Trans., xxii, p. 152 (1889).
 " " Ckll., Ann. Mag. N. H., (6), xvi, p. 134 (1895).

Habitat.—New Zealand.

On *Fagus fusca*.

500. *Pseudococcus olivaceus* (Ckll.).

- Dactylopius olivaceus* Ckll., Psyche, vii, Suppl., i, p. 18 (1896).
 " " " Bull. 4, T. s., Dep. Agr., p. 36 (1896).

Habitat.—Mexico.

On *Yucca australis*.

501. *Pseudococcus pandani* (Ckll.).

- Dactylopius pandani* Ckll., Psyche, vii, Suppl., i, p. 16 (1895).

Habitat.—Washington Islands, Marquesas Group.

On *Pandanus*.

502. *Pseudococcus parietariæ* (Licht.).

- Boisduvalia parietariæ* Licht., Bull. Soc. Ent. Fr., (6), i, p. cxv (1881).
Oudablis " Ckll., Pr. Ac. N. Sci. Ph., p. 265 (1899).
 " " " The Entom., xxxiii, p. 85 (1900).

Habitat.—Europe.

On *Parietaria diffusa*.

503. *Pseudococcus pini* (Kuwana).

- Dactylopius pini* Kuw., Pr. Cal. Ac. Sci., (3), iii, p. 54 (1902).

Habitat.—Japan.

On pine.

504. *Pseudococcus poæ* (Mask.).

- Dactylopius poæ* Mask., N. Z. Trans., xi, p. 220 (1878).
 " " " Ins. Nox. Agr. N. Z., p. 101 (1887).
 " " " N. Z. Trans., xxii, p. 150 (1889).
 " " " " " xxiii, p. 23 (1890).
 " " " " " xxvi, p. 89 (1893).

Dactylopius poæ Ckll., Can. Ent., xxvi, p. 287 (1894).

" " Lidg., The Wombat, iii, p. 91 (1898).

Habitat.—New Zealand.

On roots of grass.

505. *Pseudococcus prosopidis* (Ckll.).

Dactylopius prosopidis Ckll., Can. Ent., xxviii, p. 224 (1896).

Habitat.—New Mexico.

On Mesquite.

506. *Pseudococcus pseudonipæ* (Ckll.).

|| *Dactylopius nipæ* Davis, Spec. Bull. 2, Mich. Exp. Sta., p. 28 (1896).

" *pseudonipæ* Ckll., Science Gossip, n. s., iii, pp. 189, 302 (1897).

" " King, Can. Ent., xxxi, p. 112 (1899).

Habitat.—Mass.; Mich.; Cal.; Mexico.

On cocoanut-palm.

507. *Pseudococcus quadricaudata* (Sign.).

Boisduvalia quadricaudata Sign., Ann. Soc. Ent. Fr., (5), v, p. 339 (1875).

Oudablis " Ckll., Check List, p. 325 (1896).

" " " The Entom., xxxiii, p. 85 (1900).

Habitat.—France.

508. *Pseudococcus quaintancii* (Tins.).

Dactylopius quaintancii Tins., Can. Ent., xxx, p. 220 (1898).

Habitat.—Florida.

On *Rhus copallina*.

509. *Pseudococcus quercus* (Ehrh.).

Dactylopius quercus Ehrh., Can. Ent., xxxii, p. 315 (1900).

Habitat.—California.

On *Quercus chrysolepis*.

510. *Pseudococcus robiniaë* (Sign.).

Dactylopius robiniaë Sign., Ann. Soc. Ent. Fr., (5), v, p. 322 (1875).

" " Targ., Annali di Agr., p. 26 (1879).

" " " " " " p. 140 (1881).

Habitat.—The Maritime Alps.

On Acacia.

511. *Pseudococcus roseotinctus* (T. & W. Ckll.).

Dactylopius roseotinctus T. & W. Ckll., Can. Ent., xxxiii, p. 336 (1901).

Habitat.—New Mexico.

On roots of grass.

512. *Pseudococcus ryani* (Coq.).

Dactylopius ryani Coq., West Amer. Scientist, vi, pp. 122, 123 (1889).

Habitat.—California.

On *Cupressus macrocarpa*; *Thuja orientalis*; *Araucaria excelsior*.

513. *Pseudococcus sacchari* (Ckll.).

Dactylopius sacchari Ckll., Jn. Trin. Nat. Club., ii, p. 195 (1895).

" " Berl., Riv. Pat. Veg., iv, p. 384 (1896).

" " Ckll., Pr. Ac. N. Sci. Ph., p. 266 (1899).

" " de Charm., Pr. Soc. Amic. Scien., p. 45 (1899).

Habitat.—Trinidad; Barbados; Porto Rico; Mauritius; Mexico.

On sugar-cane.

514. *Pseudococcus salinus* (Ckll.).

Dactylopius salinus Ckll., Ann. Mag. N. H., (7), ix, p. 21 (1902).

Habitat.—California.

On grass.

515. *Pseudococcus scrobicularum* (Green).

Dactylopius scrobicularum Green, Ind. Mus. Notes, iv, No. 1, p. 8 (1896).

Habitat.—Ceylon.

On leaves of *Elæocarpus*.

516. *Pseudococcus secretus* (Hemp.).

Dactylopius secretus Hemp., Rev. Mus. Paul., iv, p. 387 (1900).

" " " Ann. Mag. N. H., (7), vi, p. 397 (1900).

Habitat.—Brazil.

On Solanaceæ.

517. *Pseudococcus segregatus* (Ckll.).

Dactylopius segregatus Ckll., Journ. Inst. Jam., i, p. 254 (1893).

Habitat.—Jamaica.

On grass.

518. *Pseudococcus sequoiæ* (Coleman).

Dactylopius sequoiæ Coleman, Pr. Cal. Ac. Sci., (3), ii, p. 410 (1901).

Habitat.—California.

On red-wood.

519. *Pseudococcus setosus* (Hemp.).

Dactylopius setosus Hemp., Rev. Mus. Paul., iv, p. 386 (1900).

" " " Ann. Mag. N. H., (7), vi, p. 396 (1900).

Habitat.—Brazil.

On Ficus.

520. *Pseudococcus similans* (Lidg.).

Dactylopius similans Lidg., The Wombat, iii, p. 91 (1898).

Habitat.—Victoria.

On roots of *Daphne*.

521. *Pseudococcus simplex* (Ckll.).

Dactylopius simplex Ckll., The Entom., xxvi, p. 267 (1893).

" " " Bull. Bot. Dep. Jam., No. 46, p. 3 (1893).

" " " Ann. Mag. N. H., (6), xvi, p. 133 (1895).

Habitat.—Jamaica.

On *Pancratium*; "Liliaceous plants."

522. *Pseudococcus solani* (Ckll.).

Dactylopius solani Ckll., Can. Ent., xxvi, p. 286 (1894).

Habitat.—New Mexico.

On potato.

***Pseudococcus solani atriplicis* (Ckll.).**

Dactylopius solani var. *atriplicis* Ckll., Am. Nat., xxix, p. 729 (1895).

Habitat.—New Mexico.

On *Atriplex canescens*.

523. *Pseudococcus sorghiellus* (Forbes).

Coccus sorghiellus Forbes, 14th Rep. Ins. Ill., p. 71 (1885).

“ “ “ 18th “ “ “ p. 106 (1894).

Dactylopius “ Tins., Can. Ent., xxxi, pp. 45, 111 (1899).

Habitat.—Illinois; Mass.

On sorghum; in nests of *Lasius claviger*, *L. flavus*, *L. americanus*.

***Pseudococcus sorghiellus kingii* (Ckll.).**

Dactylopius kingii Ckll., Science Gossip, n. s., iii, p. 240 (1899).

“ *sorghiellus* var. *kingii* King, Can. Ent., xxxi, p. 111 (1899).

Habitat.—New Mexico; Mass.

On roots of corn, sorghum and grass, and in nests of ants.

524. *Pseudococcus subterraneus* (Hemp.).

Dactylopius subterraneus Hemp., Ann. Mag. N. H., (7), viii, p. 388 (1901).

Habitat.—Argentine Republic.

“On the roots of cultivated grapes.”

525. *Pseudococcus syringæ* (Mask.).

Dactylopius syringæ Mask., N. Z. Trans., xxx, p. 246 (1898).

Habitat.—Japan.

On *Syringa*.

526. *Pseudococcus texensis* (Tins.).

Dactylopius texensis Tins., Can. Ent., xxxii, p. 65 (1900).

Habitat.—Texas.

On *Acacia Farnesiana*.

527. *Pseudococcus theobromæ* (Dougl.).

Dactylopius theobromæ Dougl., Ent. Mon. Mag., xxv, p. 317 (1889).

“ “ Ckll., Ann. Mag. N. H., (6), xvi, p. 133 (1895).

Habitat.—England.

On *Theobroma cacao*.

528. *Pseudococcus townsendi* (Ckll.).

Bergrothia townsendi Ckll., Ann. Mag. N. H., (6), xii, p. 404 (1893).

Dactylopius (*Bergrothia*) *townsendi* Newst., Ent. Mon. Mag., xxxi, p. 236 (1895).

Habitat.—New Mexico.

529. *Pseudococcus trifolii* (Forbes).

(*Clover-root Mealy bug*.)

Coccus trifolii Forbes, 14th Rep. Ins. Ill., p. 72 (1885).

" " Davis, Can. Ent., xxvi, p. 271 (1894).

Dactylopius trifolii " Bull. 116, Mich. Exp. Sta., p. 58 (1894).

" " " Ins. Life, vii, p. 172 (1894).

" " Osborn, Contr. Ia. Ag. Coll., p. 2 (1898).

" " Pettit, Bull. 200, Mich. Exp. Sta., p. 193 (1902).

Habitat.—Ill.; Mich.; Ia.; N. Y.

On clover.

530. *Pseudococcus tuliparum* (Bouché).

Coccus tuliparum Bouché, Stett. Ent. Zeit., v, p. 301 (1844).

Dactylopius " Sign., Ann. Soc. Ent. Fr., (5), v, p. 323 (1875).

Habitat.—S. America.

531. *Pseudococcus viburni* (Sign.).

Dactylopius viburni Sign., Ann. Soc. Ent. Fr., (5), p. 323 (1875).

Habitat.—France; Maritime Alps.

On *Viburnum*.

532. *Pseudococcus virgatus* (Ckll.):

Dactylopius virgatus Ckll., The Entom., xxvi, p. 178 (1893).

" " " Ins. Life, v, pp. 246, 247 (1893).

" " " Bull. Bot. Dep. Jam., No. 46, p. 2 (1893).

" " ceriferus Newst., Ind. Mus. Notes, iii, No. 5, p. 24 (1895).

" " virgatus Ckll., Can. Ent., xxvii, p. 259 (1895).

" " How., Ins. Life, vii, p. 430 (1895).

" " talini Green, Ind. Mus. Notes, iv, No. 1, p. 7 (1896).

" " ceriferus Mask., N. Z. Trans., xxix, p. 320 (1897).

" " virgatus Tins., Can. Ent., xxx, p. 22 (1898).

" " de Charm., Pr. Soc. Amic. Scien., p. 44 (1899).

Pseudococcus " Kirkaldy, Fauna Haw., iii, pt. 2, p. 103 (1902).

Habitat.—Jamaica; Sandwich Islands; Mauritius; Mexico; Texas.

On Cactus; cocoanut-palm; cotton; violets; *Acalypha*.

***Pseudococcus virgatus farinosus* (Ckll.).**

Dactylopius virgatus var. *farinosus* Ckll., The Entom., xxvi, p. 178 (1893).

Habitat.—Jamaica.

On *Prosopis juliflora*.

***Pseudococcus virgatus humilis* (Ckll.).**

Dactylopius virgatus var. *humilis* Ckll., The Entom., xxvi, p. 179 (1893).

Habitat.—Jamaica.

On *Tribulus cistoides*.

533. *Pseudococcus viridis* (Newst.).

Dactylopius viridis Newst., Ind. Mus. Notes, iii, No. 5, p. 25 (1894).

Habitat.—Madras, India.

On *Hygrophila spinosa*.

534. *Pseudococcus vitis* (Niediel.).

Coccus vitis Niediel., Bull. Soc. d' Acclim., (2), vii, p. 328 (1870).

Dactylopius vitis Licht., Bull. Soc. Ent. Fr., (5), ii, pp. lxxiii, lxxiv (1872).

“ “ “ “ “ “ “ “ iii, p. xiii (1873).

“ “ Sign., Ann. “ “ “ “ v, p. 324 (1875).

“ “ Goethe, Jahrb. Nass. Ver. Nat., pp. 126, 129 (1884).

“ “ Lataste, Actes Soc. Sci. Chili, (5), i, p. 24 (1896).

“ “ Mangin & Viala, Nature, p. 384 (1903).

Habitat.—Europe; Palestine.

On grape vine.

535. *Pseudococcus walkeri* (Newst.).

Dactylopius walkeri Newst., Ent. Mon. Mag., xxvii, p. 164 (1891).

“ “ “ Jn. Roy. Hor. Soc., xxiii, p. 27 (1900).

Habitat.—England.

On *Agrostis vulgaris*; *Dactylus glomeratus*.

536. *Pseudococcus wheeleri* (King).

Dactylopius wheeleri King, Can. Ent., xxxiv, p. 285 (1902).

Habitat.—Texas.

In nests of *Camponotus maculatus* var. *sansabeanus* Buckley.

537. *Pseudococcus zamiae* (Lucas).

Coccus zamiae Lucas, Bull. Soc. Ent. Fr., (3), v, p. cvii (1855).

“ “ Bdv., Ent. Hort., p. 357 (1867).

Dactylopius “ Sign., Ann. Soc. Ent. Fr., (5), v, p. 328 (1875).

Habitat.—Europe; Australia.

On *Zamia spiralis*.

Genus **ERIUM** Crawl. Type, *globosum*.

Erium “ Crawl.,” Mask., N. Z. Trans., xxiv, p. 35 (1891); Ckll., Am. Nat.,
xxxi, p. 590 (1897); Can. Ent., xxxi, p. 278 (1899).

538. *Erium armatum* Hemp.

Erium armatum Hemp., Rev. Chil. Hist. Nat., p. 180 (1901).

Habitat.—South America.

539. *Erium eriogoni* (Ehrh.).

Dactylopius eriogoni Ehrh., Can. Ent., xxxi, p. 103 (1899).

Erium “ Ckll., Ann. Mag. N. H., (7), x, p. 465 (1902).

Habitat.—California.

On roots of *Eriogonum*.

540. Erium globosum (Mask.).

Dactylopius globosus Mask., N. Z. Trans., xxiv, p. 34 (1891).

" " Newst., Ent. Mon. Mag., xxxi, p. 167 (1895).

Erium " Ckll., Am. Nat., xxxi, p. 590 (1897).

" " " Can. Ent., xxxi, p. 278 (1899).

Habitat.—Australia.

On *Acacia armata*; *A. decurrens*.

541. Erium irishi (Ckll.).

Dactylopius Irishi Ckll., Can. Ent., xxxii, p. 129 (1900).

Erium " " Ann. Mag. N. H., (7), x, p. 466 (1902).

Habitat.—Arizona.

On *Larrea tridentata*.

542. Erium lichtensioides (Ckll.).

Dactylopius lichtensioides Ckll., Science Gossip, n. s., iii, p. 199 (1897).

Erium " " Ann. Mag. N. H., (7), x, p. 466 (1902).

Habitat.—Colorado.

On *Artemisia frigida*.

543. Erium steelii (Ckll. & Towns.).

Bergrothia steelii Ckll. & Towns., Ent. News, v, p. 263 (1894).

" townsendi var. steelii Ckll., Ent. News, v, p. 282 (1894).

Erium steelii Ckll., Ann. Mag. N. H., (7), x, p. 466 (1902).

Habitat.—New Mexico; Mexico.

On *Larrea mexicana*.

544. Erium zapotlanum Ckll.

Erium zapotlanum Ckll., Ann. Mag. N. H., (7), x, p. 465 (1902).

Habitat.—Mexico.

On "Huele de Noche."

Genus **RHIZÆCUS** Künck. Type, *falcifer*.

Rhizæcus Künck., Ann. Soc. Ent. Fr., (5), viii, p. 163 (1878); Ckll., Can. Ent., xxxi, p. 278 (1899).

545. Rhizæcus eloti Giard.

Rhizæcus eloti Giard, C. R. Soc. Biol., Paris, iv, pp. 583, 585 (1897).

Habitat.—Guadeloupe.

On roots of coffee-tree.

546. Rhizæcus falcifer Künck.

Rhizæcus falcifer Künck., Ann. Soc. Ent. Fr., (5), viii, p. 164 (1878).

Rhyzæcus " Sign., Bull. " " (6), ii, p. xxxv (1882).

Rhizæcus " Künck. & Saliba, Bull. Soc. Ent. Fr., (7), i, p. cxvi (1891).

Habitat.—France; Algeria.

On roots of palms and vines.

547. *Rhizæcus*(?) *targionii* (Ckll.) in litt., new name.

- Dactylopius mammillariæ* Targ., *Annali di Agr.*, p. 17 (1884).
Westwoodia sp. n. " " " " p. 402 (1884).
Rhizæcus (?) *mammillariæ* Ckll., *Pr. Ac. N. Sci. Ph.*, p. 265 (1899).
 Habitat.—Italy.
 On *Mammillaria*.

548. *Rhizæcus*(?) *terrestris* (Newst.).

- Ripersia terrestris* Newst., *Ent. Mon. Mag.*, xxxi, pp. 213, 236 (1895).
Rhizæcus " Ckll., *Pr. Ac. N. Sci. Ph.*, p. 265 (1899).
Ripersia " Newst., *Jn. Roy. Hor. Soc.*, xxiii, p. 31 (1900).
 " " " " " " " " xxvi, p. 745 (1902).
 Habitat.—England.
 On roots of *Stephanotis*.

Genus *FONSCOLOMBIA* Licht. Type, *radicum-graminis*.

- Fonscolombia* Licht., *Bull. Soc. Ent. Fr.*, (5), vii, p. cviii (1877); Ckll., *Can. Ent.*, xxxi, p. 278 (1899).
Pseudochermes Nitsche, *Lehrb. der Mittel.*, Forstins. (1895).
 s. g. *Apterococcus* Newst., *Ent. Mon. Mag.*, xxxiv, p. 97 (1898). Type, *fraxini*.

549. *Fonscolombia fraxini* (Kalt.).

- Chermes*(?) *fraxini* Kalt., *Die Pflanz.*, p. 433 (1874).
Eriococcus " Newst., *Ent. Mon. Mag.*, xxvii, p. 165 (1891).
Ripersia " " " " " " xxviii, p. 147 (1892).
 " " " " " " xxxii, p. 57 (1896).
Coccus " Eckst., *Forst. Zool.*, p. 556 (1897).
Fonscolombia fraxini Ckll., *Pr. Ac. N. Sci. Ph.*, p. 264 (1899).
Apterococcus " Newst., *Jn. Roy. Hor. Soc.*, xxiii, p. 32 (1900).
 Habitat.—Europe.
 On *Fraxinus excelsior*.

550. *Fonscolombia radicum-graminis* (Fonsc.).

- ?*Coccus fragariæ* Gmel., *Syst. Nat.*, Ed. xiii, p. 2219 (1789).
 " " Oliv., *Ency. Meth.*, vi, p. 97 (1791).
 " " Turton, *Syst. Nat.*, p. 715 (1801).
 " *radicum-graminis* Fonsc., *Ann. Soc. Ent. Fr.*, iii, p. 212 (1834).
Porphyrophora " " Baer., *D'Alton, Zeit. für Zool.*, p. 175 (1848).
Lecanopsis? " " Sign., *Ann. Soc. Ent. Fr.*, (5), iv, p. 95 (1874).
Porphyrophora " " " " " " v, p. 384 (1875).
Fonscolombia graminis Licht., *Bull.* " " " " " " vii, p. cviii (1877).
 " " " " *Ent. Mon. Mag.*, xiv, p. 35 (1877).
Coccus radicum-graminis " Stett. *Ent. Zeit.*, xxxviii, p. 491 (1877).
Porphyrophora radicum-graminis Newst., *Ent. Mon. Mag.*, xxix, p. 205 (1893).
Fonscolombia " " Ckll., *Pr. Ac. N. Sci. Ph.*, p. 264 (1899).
 Habitat.—Europe.
 On roots of grass and grain.

Genus **PSEUDORIPERSIA** Ckll. Type, *turgipes*.

s. g. *Pseudoripersia* Ckll., Check List, Suppl., p. 392, footnote (1899); g. Can. Ent., xxxi, p. 278 (1899).

551. *Pseudoripersia turgipes* (Mask.).

Eriococcus turgipes Mask., N. Z. Trans., xxv, p. 228 (1892).

Ripersia " " " " xxix, p. 318 (1896).

Eriococcus " Frog., Agr. Gaz. N. S. W., p. 8 (1900).

Habitat.—Australia.

On *Casuarina suberosa*.

Genus **RIPERSIELLA** Tins. Type, *rumicis*.

Ripersiella Tins., Can. Ent., xxxi, p. 278 (1899); Ckll., Pr. Biol. Soc. Wash., xiv, p. 165 (1901).

552. *Ripersiella kelloggi* Ehrh. & Ckll.

Ripersiella kelloggi Ehrh. & Ckll., Pr. Biol. Soc. Wash., xiv, p. 166 (1901).

Habitat.—California.

On roots of bunch-grass.

553. *Ripersiella leucosoma* Ckll.

Ripersiella leucosoma Ckll., Pr. Biol. Soc. Wash., xiv, p. 165 (1901).

Habitat.—New Mexico.

In nests of *Lasius americanus*, under rocks.

554. *Ripersiella maritima* (Ckll.).

Ripersia maritima Ckll., Ins. Life, vii, p. 42 (1894).

Ripersiella " " Pr. Biol. Soc. Wash., xiv, p. 165 (1901).

Habitat.—Long Island, N. Y.

On roots of *Spartina*.

555. *Ripersiella rumicis* (Mask.).

Ripersia rumicis Mask., N. Z. Trans., xxiv, p. 37 (1891).

Ripersiella " Ckll., Pr. Biol. Soc. Wash., xiv, p. 165 (1901).

Habitat.—New Zealand.

On *Rumex acetosella*.

Genus **GEOCOCCUS** Green. Type, *radicum*.

Geococcus Green, Ent. Mon. Mag., xxxviii, p. 262 (1902).

556. *Geococcus radicum* Green.

Geococcus radicum Green, Ent. Mon. Mag., xxxviii, p. 262 (1902).

Habitat.—Ceylon.

On roots of grass.

Genus **RIPERSIA** Sign. Type, corynephor.

Ripersia Sign., Ann. Soc. Ent. Fr., (5), v, p. 335 (1875): Mask., N. Z. Trans., xix, p. 106 (1886) & xxiv, p. 37 (1891).

s. g. *Cryptoripersia* Ckll., Can. Ent., xxxi, pp. 5, 278 (1899). Type, arizonensis.

557. *Ripersia arizonensis* Ehrh.

Ripersia arizonensis Ehrh., Can. Ent., xxxi, p. 5 (1899).

Habitat.—Arizona.

In nests of ants.

558. *Ripersia aurantia* Ckll.

Ripersia aurantia Ckll., Ann. Mag. N. H., (7), viii, p. 51 (1901).

Habitat.—New Mexico.

In nests of *Lasius americanus*.

559. *Ripersia blanchardii* King & Ckll.

Ripersia blanchardii King & Ckll., Can. Ent., xxix, p. 92 (1897).

“ “ Tins., “ “ xxxi, p. 46 (1899).

“ “ King, “ “ “ p. 111 (1899).

Habitat.—Mass.

In nests of *Lasius claviger*.

560. *Ripersia cockerellæ* King.

Ripersia cockerellæ Ckll., Ann. Mag. N. H., (7), viii, p. 52 (1901) no descr.

“ “ King, Ent. News, xiii, p. 42 (1902).

Habitat.—New Mexico.

In nests of *Lasius neoniger*.

561. *Ripersia confusella* Ckll.

Ripersia confusella Ckll., Ann. Mag. N. H., (7), viii, p. 52 (1901).

Habitat.—New Mexico.

In nests of *Lasius americanus*.

562. *Ripersia corynephor* Sign.

Ripersia corynephor Sign., Ann. Soc. Ent. Fr., (5), v, p. 335 (1875).

Habitat.—France.

On *Corynephorus canescens*.

563. *Ripersia europæa* Newst.

Ripersia europæa Newst., Ent. Mon. Mag., xxxiii, p. 167 (1897).

Habitat.—Europe.

In nests of ants.

564. *Ripersia fagi* Mask.

Ripersia fagi Mask., N. Z. Trans., xiii, p. 24 (1890).

“ “ “ The Entom., xxvii, p. 46 (1894).

Habitat.—New Zealand.

On *Fagus menziesii*.

565. *Ripersia festucae* Kuwana.

Ripersia festucae Kuw., Pr. Cal. Ac. Sci., (3), ii, p. 401 (1901).

" " Ckll., Ann. Mag. N. H., (7), ix, p. 21 (1902).

Habitat.—California.

On *Festuca scabrella*.

566. *Ripersia filicicola* Newst.

Ripersia filicicola Newst., Ent. Mon. Mag., xxxiv, p. 96 (1898).

Habitat.—England.

On *Trichomanes spicatum*.

567. *Ripersia fimbriatula* Ckll. & King.

Ripersia fimbriatula Ckll., Ann. Mag. N. H., (7), viii, p. 53 (1901).

" " King, Ent. News, xiii, p. 41 (1902).

Habitat.—New Mexico.

In nests of *Lasius americanus*.

568. *Ripersia flaveola* Ckll.

Ripersia flaveola Ckll., Can. Ent., xxviii, p. 224 (1896).

" " King, Ent. News, viii, p. 127 (1897).

" " Tins., Can. Ent., xxxi, p. 46 (1899).

" " King, " " " p. 110 (1899).

" " Ckll., Ann. Mag. N. H., (7), viii, p. 53 (1901).

Habitat.—Mass.; New Mexico.

In nests of *Lasius interjectus*; *L. claviger*.

569. *Ripersia formicicola* Mask.

Ripersia formicicola Mask., N. Z. Trans., xxiv, p. 38 (1891).

" " Newst., Ent. Mon. Mag., xxviii, p. 147 (1892).

" " Smith, W. W., Ent. Mon. Mag., xxviii, p. 307 (1892).

" " Newst., Ent. Mon. Mag., xxxiii, p. 167 (1897).

Habitat.—New Zealand.

In nests of *Tetramorium striatum*; *T. nitidum*.

570. *Ripersia halophila* (Hardy).

Coccus halophilus Hardy, Cochenille in Algeria (1860).

" " Sign., Ann. Soc. Ent. Fr., (5), vi, p. 616 (1876).

" " Ckll., Ins. Life, vii, p. 43 (1894).

Dactylopius radicum Newst., Ent. Mon. Mag., xxxi, p. 235 (1895).

Ripersia halophila Ckll., Check List, p. 325, footnote (1896).

Habitat.—Algeria; France; England; Wales.

On *Ligusticum scoticum*; *Radiola rosea*; *Statice armeria*: grass.

571. *Ripersia kingii* Ckll.

Ripersia kingii Ckll., Can. Ent., xxviii, p. 222 (1896).

" " King, Ent. News, viii, p. 126 (1897).

" " " Can. Ent., xxxi, p. 110 (1899).

Habitat.—Mass.

In nests of ants.

572. *Ripersia lasii* Ckll.

Ripersia lasii Ckll., Can. Ent., xxviii, p. 223 (1896).

“ “ King, Ent. News, viii, p. 126 (1897).

“ “ “ Psyche, viii, p. 312 (1899).

“ “ “ Can. Ent., xxxi, p. 110 (1899).

“ basi (error) King, Can. Ent., xxxiv, p. 159 (1902).

Habitat.—Can.; Mass.

On roots of Asters; in nests of ants.

573. *Ripersia leptospermi* Mask.

Ripersia leptospermi Mask., Tr. Roy. Soc. S. Austr., p. 106 (1888).

“ “ “ N. Z. Trans., xxv, p. 235 (1892).

“ “ Newst., Ent. Mon. Mag., xxviii, p. 147 (1892).

Habitat.—S. Australia.

On *Leptospermum laevigatum*.

574. *Ripersia magna* T. & W. Ckll.

Ripersia magna T. & W. Ckll., Ann. Mag. N. H., (7), viii, p. 56 (1901).

Habitat.—New Mexico.

575. *Ripersia minima* Tins. & King.

Ripersia minima Tins. & King, Ent. News, x, p. 57 (1899).

“ “ King, Can. Ent., xxxi, p. 111 (1899).

Habitat.—Mass.

In nests of *Lasius americanus*.

576. *Ripersia montana* Newst.

Ripersia montana Newst., Ent. Mon. Mag., xxxiv, p. 97 (1898).

“ “ “ “ “ “ xxxvi, p. 249 (1900).

Habitat.—France; Italy.

On roots of grass and Compositæ; in nests of ants.

577. *Ripersia myrmecophila* Mask.

Ripersia myrmecophila Mask., N. Z. Trans., xxx, p. 244 (1897).

Habitat.—Michigan.

578. *Ripersia porterae* Ckll.

Ripersia porterae Ckll., Ann. Mag. N. H., (7), viii, p. 53 (1901).

Habitat.—New Mexico.

On roots of grass.

579. *Ripersia pulveraria* Newst.

Ripersia pulveraria Newst., Ent. Mon. Mag., xxviii, p. 145 (1892).

“ “ “ “ “ “ xxix, p. 78 (1893).

Habitat.—England.

On *Agrostis vulgaris*.

580. *Ripersia pupifera* (Licht.).

Ritsemia pupifera Licht., Stett. Ent. Zeit., xl, p. 387 (1879).

“ “ “ C. R. Acad. Sci., Paris, p. 870 (1879).

“ “ Sign., Bull. Soc. Ent. Fr., (5), ix, p. lxvi (1879).

“ “ Ckll., Ann. Mag. N. H., (5), iii, p. 456 (1879).

“ “ Licht., Am. Nat., xvii, p. 977 (1883).

Ripersia “ Ckll., in litt. (1902).

Habitat.—France.

On elm.

581. *Ripersia sacchari* Green.

Ripersia sacchari Green, Ind. Mus. Notes, v, p. 37 (1900).

Habitat.—India.

On sugar cane.

582. *Ripersia salmonacea* Ckll.

Ripersia salmonacea Ckll., Ann. Mag. N. H., (7), viii, p. 54 (1901).

Habitat.—New Mexico.

On roots of grass.

583. *Ripersia serrata* Tins.

Ripersia serrata Tins., Can. Ent., xxxii, p. 66 (1900).

Habitat.—Trinidad.

584. *Ripersia sporoboli* Ckll.

Ripersia sporoboli Ckll., Ann. Mag. N. H., (7), ix, p. 20 (1902).

Habitat.—New Mexico.

On stems of *Sporobolus depauperatus*.

585. *Ripersia subterranea* Newst.

Ripersia subterranea Newst., Ent. Mon. Mag., xxix, p. 79 (1893).

Habitat.—England.

On roots of *Nardus stricta*; in nests of *Formica flava*.

586. *Ripersia tenuipes* Ckll.

Ripersia tenuipes Ckll., Ann. Mag. N. H., (7), viii, p. 54 (1901).

Habitat.—New Mexico.

On roots of grass.

587. *Ripersia tomlinii* Newst.

Ripersia tomlinii Newst., Ent. Mon. Mag., xxviii, p. 146 (1892).

“ “ “ “ “ “ xxix, pp. 77, 207 (1893).

“ “ “ “ “ “ xxxiii, p. 168 (1897).

Habitat.—England.

On grass roots; in nests of ants.

588. *Ripersia trichura* Ckll.

Ripersia trichura Ckll., Ann., Mag. N. H., (7), viii, p. 55 (1901).

Habitat.—New Mexico.

On roots of grass.

589. *Ripersia trivittata* Ckll.

Ripersia trivittata Ckll., Ann. Mag. N. H., (7), viii, p. 55 (1901).

Habitat.—New Mexico.

In nests of *Lasius americanus*.

590. *Ripersia tumida* Newst.

Ripersia tumida Newst., Ent. Mon. Mag., xxxiii, p. 168 (1897).

Habitat.—Algeria.

In nests of *Camponotus*.

591. *Ripersia villosa* Ehrh.

Ripersia villosa Ehrh., Can. Ent., xxxi, p. 6 (1899).

Habitat.—California.

On *Quercus agrifolia*.

592. *Ripersia viridula* Ckll.

Ripersia viridula Ckll., Ann. Mag. N. H., (7), viii, p. 56 (1901).

Habitat.—New Mexico.

In nests of *Lasius americanus*.

593. *Ripersia wasmanni* Newst.

Ripersia wasmanni Newst., Ent. Mon. Mag., xxxvi, p. 249 (1900).

Habitat.—France; Germany.

In nests of *Lasius alienus*.

Genus **CHÆTOCOCCUS** Mask. Type, *bambusæ*.

Chætococcus Mask., N. Z. Trans., xxx, p. 249 (1898): Ckll., Can. Ent., xxxi, p. 278 (1899).

594. *Chætococcus bambusæ* (Mask.).

Sphærococcus bambusæ Mask., N. Z. Trans., xxv, p. 237 (1892).

Chætococcus “ Ckll., Rev. Mus. Paul., iii, p. 501 (1898).

Kermicus “ “ The Entom., xxxii, p. 93 (1899).

Sphærococcus “ de Charm., Pr. Soc. Amic. Scien., p. 48 (1899).

Chætococcus “ Hemp., Rev. Mus. Paul., iv, p. 397 (1900).

Habitat.—Sandwich Islands; Mauritius; Ceylon; Brazil.

On bamboo (*Bambusa*).

Genus **CRYPTOCOCCUS** Dougl. Type, *fagi*.

Cryptococcus Dougl., Ent. Mon. Mag., xxvi, p. 155 (1890): Sulc., Sitzb. K.

Bohm. Ges. Wiss., No. xlix, pp. 13, 22 (1895): Ckll., Can. Ent., xxxi, p.

279 (1899).

595. *Cryptococcus fagi* (Baer.).

Coccus fagi Baer., D'Alton, Zeit. für Zool., p. 174 (1849).

“ “ Walk., Cat. Br. Mus., Hom., p. 1086 (1852).

“ “ Sign., Ann. Soc. Ent. Fr., (5), vi, p. 615 (1876).

- Pseudococcus fagi* Dougl., Ent. Mon. Mag., xxiii, p. 152 (1886).
Cryptococcus " " " " " xxvi, p. 155 (1890).
Coccus " Eckst., Forst. Zool., p. 556 (1897).
Cryptococcus " Ormerod, Rep. Inj. Ins., p. 139 (1900).
 " " Newst., Jn. Roy. Hor. Soc., xxiii, p. 31 (1900).

Habitat.—Europe.

On beech (*Fagus*).

Genus **KUWANINA** Ckll. Type, parvus.

Kuwanina Ckll., ["*Kuwanina* differs from *Antonina* by the larva having 3 or 4 jointed antennae." Ckll. 1902].

596. *Kuwanina parvus* (Mask.).

Sphærococcus parvus Mask., Ent. Mon. Mag., xxxiii, p. 244 (1897).

" " Kuw., Pr. Cal. Ac. Sci., (3), iii, p. 56 (1902).

Kuwanina " Ckll., in litt. (1902).

Habitat.—Japan.

On cherry.

Genus **ANTONINA** Sign. Type, purpurea.

Antonina Sign., Ann. Soc. Ent. Fr., (5), v, p. 24 (1875): Ckll., Can. Ent., xxxi, p. 279 (1899).

Laboulbenia Licht., Mittheil. Schw. Ent. Ges., v, p. 229 (1878).

597. *Antonina boutelouæ* Parr.

Antonina boutelouæ Parr., Bull. 98, Kan. Exp. Sta., p. 138 (1900).

Habitat.—Kansas.

On *Bouteloua hirsuta*.

598. *Antonina crawi* Ckll.

Antonina crawi Ckll., Psyche, ix, p. 70 (1900).

" " Kuw., Pr. Cal. Ac. Sci., (3), iii, p. 57 (1902).

Habitat.—Japan; California.

On bamboo.

599. *Antonina graminis* (Mask.).

Sphærococcus graminis Mask., Ent. Mon. Mag., xxxiii, p. 244 (1897).

Kermicus " Ckll., Check List, Suppl., p. 392 (1899).

Antonina " " in litt. (1902).

Habitat.—China.

On grass.

600. *Antonina nortoni* Parr. & Ckll.

Antonina nortoni Parr. & Ckll., Can. Ent., xxxi, p. 280 (1899).

" " " Bull. 98, Kan. Exp. Sta., p. 140 (1900).

Habitat.—Kansas.

On *Bouteloua racemosa*.

601. *Antonina parrotti* Ckll. new name.

||*Antonina graminis* Parr., Bull. 98, Kan. Exp. Sta., p. 140 (1900).

" *parrotti* Ckll., in litt. (1902).

Habitat.—Kansas.

On grasses.

602. *Antonina purpurea* Sign.

Antonina purpurea Sign., Ann. Soc. Ent. Fr., (5), v, p. 25 (1875).

Laboulbenia brachypodii Licht., Mitth. Schw. Ent. Ges., v, p. 299 (1878).

Antonina purpurea Licht., Ann. Soc. Ent. Fr., (5), ix, p. 45 (1879).

" *brachypodii* Ckll., Check List, p. 324 (1896).

" *purpurea* Parr., Bull. 98, Kan. Exp. Sta., p. 138 (1900).

Habitat.—France.

On grass.

603. *Antonina socialis* Newst.

Antonina socialis Newst., Ent. Mon. Mag., xxxvii, p. 85 (1901).

Habitat.—England, in greenhouses.

On *Arundinaria japonica*.

Genus **KERMICUS** Newst. Type, wroughtoni.

Kermicus Newst., Ent. Mon. Mag., xxxiii, p. 170 (1897): Ckll., Can. Ent., xxxi, p. 279 (1899).

604. *Kermicus wroughtoni* Newst.

Kermicus wroughtoni Newst., Ent. Mon. Mag., xxxiii, p. 170 (1897).

Habitat.—India.

Genus **TERMITOCOCCUS** Silv.

Termitococcus Silv., Boll. Mus. Torino, xvi, No. 395, p. 4 (1901). Type, aster. The location of this genus is uncertain.

605. *Termitococcus aster* Silv.

Termitococcus aster Silv., Boll. Mus. Torino, xvi, No. 395, p. 4 (1901).

Habitat.—Paraguay.

In ants' nests.

606. *Termitococcus brevicornis* Silv.

Termitococcus brevicornis Silv., Boll. Mus. Torino, xvi, No. 395, p. 4 (1901).

Habitat.—Cuyabá, Brazil.

In ants' nests.

Subfamily TACHARDIINÆ.

Genus **TACHARDIA** R. Blanchard. Type, lacca.

||Carteria Sign., Ann. Soc. Ent. Fr., (5), iv, p. 101 (1874): Comst., Rep.
U. S. Dep. Ag., 1881-2, p. 209 (1882): Mask., N. Z. Trans., xxiv, p. 54
(1891).

Tachardia R. Blanch., Zoologie Medicale, i, p. ? (1886): Sign., Bull. Soc.

Ent. Fr., (6), vi, p. lxii (1886): Mask., N. Z. Trans., xxix, p. 330 (1897).

s. g. Tachardiella Ckll., The Entom., xxxiv, p. 249 (1891). Type, cornuta.

s. g. Tachardina " " " " p. 249 (1891). Type, albida.

607. Tachardia acaciæ (Mask.).

Carteria acaciæ Mask., N. Z. Trans., xxiv, p. 56 (1891).

" " Targ., Contr. l'etude Gom. laques, p. 121 (1893).

Tachardia " " "On species of Lacca," p. 31 (1893).

" " Frog., Scale Ins. Lac, p. 5 (1900).

Habitat.—Australia.

On Acacia greggii.

608. Tachardia actinella Ckll. & King.

Tachardia actinella Ckll. & King, The Entom., xxxiv, p. 342 (1901).

Habitat.—Natal.

609. Tachardia albida Ckll.

Tachardia albida Ckll., The Entom., xxxiv, p. 249 (1901).

Habitat.—Natal.

On Mimosa.

610. Tachardia australis Frog.

Tachardia australis Frog., Scale Ins. Lac, p. 3 (1900).

Habitat.—Australia.

On Beyeria viscosa.

611. Tachardia convexa Full.

Tachardia convexa Full., Tr. Ent. Soc. Lond., p. 457 (1899).

Habitat.—W. Australia.

On Hypocalymma.

612. Tachardia cornuta Ckll.

Tachardia cornuta Ckll., Can. Ent., xxvi, p. 284 (1894).

" " " The Entom., xxxv, p. 178 (1902).

Habitat.—New Mexico; Mexico.

On Parthenium incanum.

613. Tachardia cydoniæ Hemp.

Tachardia cydoniæ Hemp., Rev. Mus. Paul., iv, p. 410 (1900).

" " " " Ann. Mag. N. H., (7), vii, p. 120 (1901).

Habitat.—Brazil.

On *Cydonia*.

614. Tachardia decorella (Mask.).

Carteria decorella Mask., N. Z. Trans., xxv, p. 247 (1892).

Tachardia " " " " xxvii, p. 70 (1894).

" " " " " xxviii, p. 408 (1896).

Carteria " Barlow, Ind. Mus. Notes, iv, No. 2, p. 58 (1896).

Tachardia " Frog., Scale Ins. Lac, p. 4 (1900).

Habitat.—Australia; India; China.

On *Myrica cerifera*; *Gardenia florida*; *Eugenia Smithii*; *Leucopogon microphyllus*; *Monotoca elliptica*: tea plant.

615. Tachardia fulgens Ckll.

Tachardia fulgens Ckll., Psyche, vii, Suppl., i, p. 1 (1895).

" " " " Pr. Ent. Soc. Lond., p. xxi (1895).

Habitat.—Arizona; Mexico.

On *Mimosa*; *Prosopis*; *Coursetia glandulosa*.

616. Tachardia fulvoradiata Ckll.

Tachardia fulvoradiata Ckll., Ann. Mag. N. H., (7), i, p. 431 (1898).

Habitat.—Mexico.

On "Palo de gusano."

617. Tachardia gemmifera Ckll.

Tachardia gemmifera Ckll., Can. Ent., xxv, p. 181 (1893).

" " " " Targ., Contr. l'étude Gom. laques, p. 121 (1893).

" " " " " "On Species of *Lacca*," p. 32 (1893).

Habitat.—Jamaica.

On *Chrysobalanus icaco*.

618. Tachardia ingæ Hemp.

Tachardia ingæ Hemp., Rev. Mus. Paul., iv, p. 415 (1900).

" " " " Ann. Mag. N. H., (7), vii, p. 124 (1901).

Habitat.—Brazil.

On *Inga*.

619. Tachardia lacca (Kerr).

Coccus lacca Kerr, Philos. Trans., lxxi, p. 374 (1782).

" *ficus* Fab., Mant. Ins., ii, p. 319 (1787).

" " Gmel., Syst. Nat., Ed. xiii, p. 2218 (1789).

" " Oliv., Ency. Meth., vi, p. 96 (1791).

" " Fab., Ent. Syst., iv, p. 225 (1794).

" " Turton, Syst. Nat., p. 713 (1801).

" " Fab., Syst. Rhyng., p. 308 (1803).

- Coccus lacca* Ratz., *Mediz. Zool.*, ii, p. 226 (1833).
 " " Blanch., *Hist. Nat. Ins.*, iii, p. 213 (1840).
 " " Carter, *Ann. Mag. N. H.*, (3), vii, pp. 1, 10 (1861).
Carteria " Sign., *Ann. Soc. Ent. Fr.*, (5), iv, p. 102 (1874).
 " " Comst., *Rep. U. S. Dep. Ag.*, 1881, p. 209 (1882).
 " " " 2nd Rep. *Dep. Ent. Corn. Univ.*, p. 130 (1883).
 " " Blanch., *Les Coccides utiles*, p. 36 (1883).
 " " Uhler, *St. Nat. Hist.*, ii, p. 216 (1884).
 " " Comst., *Intr. Ent.*, p. 136 (1888).
 " " Riley, *Ins. Life*, i, p. 345 (1889).
 " " Targ., *Contr. l'etude Gom. laques*, pp. 104, 119 (1893).
 " " " "On Species of *Lacca*," pp. 15, 29 (1893).
 " " Comst., *Man. Ins.*, p. 166 (1895).
 " " Lint., 11th Rep. *Ins. N. Y.*, p. 201 (1896).
Tachardia " Green, *Cocc. Ceylon*, pt. i, p. 3 (1896).
 " " Ckll., *Check List*, p. 328 (1896).
 " " How., *Bull. 9, n. s., Dep. Ag.*, p. 38 (1897).
 " " Newst., *Jn. Roy. Hor. Soc.*, xxiii, p. 1 (1900).
 Habitat.—British Guiana; India; Ceylon.
 On banyan; fig; *Rhamnus*; *Mimosa*; *Anona*, etc.

620. *Tachardia larreae* (Comst.).

- Carteria larreae* Comst., *Rep. U. S. Dep. Ag.*, 1881, p. 211 (1882).
 " " Blanch., *Les Coccides utiles*, p. 50 (1883).
 " " Sign., *Bull. Soc. Ent. Fr.*, (6), vi, p. lxii (1886).
 " " Riley, *Ins. Life*, i, p. 345 (1889).
 " " Targ., *Contr. l'etude Gom. laques*, p. 119 (1893).
Tachardia " Ckll., *Can. Ent.*, xxvi, p. 31 (1894).
 " " How., *Ins. Life*, Vol. vii, p. 369 (1895).
 " " " *Bull. 9, n. s., Dep. Ag.*, p. 38 (1897).
 " " Ckll., *Bull. 32, Ariz. Exp. Sta.*, p. 285 (1899).
 Habitat.—Southwestern United States; Mexico.
 On *Larrea mexicana*.

621. *Tachardia melaleucæ* (Mask.).

- Carteria melaleucæ* Mask., *N. Z. Trans.*, xxiv, p. 54 (1891).
 " " " " " xxv, p. 249 (1892).
 " " Targ., *Contr. l'etude Gom. laques*, p. 120 (1893).
 " " " "On Species of *Lacca*, p. 31 (1893).
Tachardia " Mask., *N. Z. Trans.*, xxvii, p. 31 (1894).
 " " " " xxviii, p. 381 (1895).
 " " Full., *Tr. Ent. Soc. Lond.*, p. 457 (1899).
 " " Frog., *Scale Ins. Lac*, p. 4 (1900).

Habitat.—Australia.

On *Melaleuca uncinata*; *M. pustulata*; *Eucalyptus*; *Leptospermum*; *Aster axillaris*.

622. *Tachardia mexicana* (Comst.).

- Carteria mexicana* Comst., Rep. U. S. Dep. Ag., 1881, p. 212 (1882).
 " " Blanch., Les Coccides utiles, p. 51 (1883).
 " " Sign., Bull. Soc. Ent. Fr., (6), vi, p. lxii (1886).
 " " Targ., Contr. l'etude Gom. laques, p. 120 (1893).
 " " " " On Species of *Lacca*," p. 31 (1893).
Tachardia " Towns. & Ckll., Jn. N. Y. Ent. Soc., vi, p. 173 (1898).
 Habitat.—Mexico.
 On *Mimosa*.

623. *Tachardia nigra* Towns. & Ckll.

- Tachardia nigra* Towns. & Ckll., Jn. N. Y. Ent. Soc., vi, p. 172 (1898).
 Habitat.—Mexico.
 On *Acacia*.

624. *Tachardia parva* Hemp.

- Tachardia parva* Hemp., Rev. Mus. Paul., iv, p. 413 (1900).
 " " " Ann. Mag. N. H., (7), vii, p. 122 (1901).
 Habitat.—Brazil.
 On Myrtaceæ.

625. *Tachardia pustulata* Ckll.

- Tachardia pustulata* Ckll., Psyche, vii, Suppl., i, p. 2 (1895).
 " " " Pr. Ent. Soc. Lond., p. xxi (1895).
 Habitat.—Arizona.

626. *Tachardia rosæ* Hemp.

- Tachardia rosæ* Hemp., Rev. Mus. Paul., iv, p. 414 (1900).
 " " " Ann. Mag. N. H., (7), vii, p. 123 (1901).
 Habitat.—Brazil.
 On cultivated roses.

627. *Tachardia rotundata* T. & W. Ckll.

- Tachardia rotundata* T. & W. Ckll., Ann. Mag. N. H., (7), xi, p. 165 (1903).
 Habitat.—Mexico.
 On "*Zicna*;" "*Guasima*."

628. *Tachardia rubra* Hemp.

- Tachardia rubra* Hemp., Rev. Mus. Paul., iv, p. 411 (1900).
 " " " Ann. Mag. N. H., (7), vii, p. 121 (1901).
 Habitat.—Brazil.
 On *Cydonia*; *Croton*.

Genus **GASCARDIA** Targ. Type. madagascariensis.

- Gascardia* Targ., Contr. à l'Etude Gomm. Laques, Indes, Madagascar, p. 88 (1893); Bull. Soc. Ent. Ital., xxvi, p. 456 (1894).

629. Gascardia madagascariensis Targ.

Gascardia madagascariensis Targ., Contr. à l'Etude Gom. Laques, p. 88 (1893).

" " Bull. Soc. Ent. Ital., xxvi, p. 456 (1894).

Habitat.—Madagascar.

On laurel.

Subfamily COCCINÆ.

Genus **CERONEMA** Mask. Type, banksiæ.

Ceronema Mask., N. Z. Trans., xxvii, p. 55 (1894); Ckll., Can. Ent., xxxi, p. 330 (1899).

630. Ceronema banksiæ Mask.

Ceronema banksiæ Mask., N. Z. Trans., xxvii, p. 56 (1894).

" " Full., Tr. Ent. Soc. Lond., p. 460 (1899).

Habitat.—Australia.

On Banksia serrata; B. ilicifolia; B. attenuata; B. menziesii.

631. Ceronema dryandræ Full.

Ceronema dryandræ Full., Notes on Cocc. W. Austr., p. 6 (1897).

" " Tr. Ent. Soc. Lond., p. 460 (1899).

Habitat.—W. Australia.

On Dryandra floribunda; D. nivea.

632. Ceronema japonica Mask.

Ceronema japonica Mask., Ent. Mon. Mag., xxxiii, p. 243 (1897).

" " Green, Ind. Mus. Notes, v, No. 1, p. 11 (1900).

Habitat.—Japan; India.

On Ilex crenata; tea-plant.

Genus **ERIOCHITON** Mask. Type, hispidus.

Eriochiton Mask., N. Z. Trans., xix, p. 46 (1886); Ins. Nox. Agr. N. Z., p.

84 (1887); Ckll., Can. Ent., xxxi, p. 330 (1899).

633. Eriochiton hispidus Mask.

Eriochiton hispidus Mask., N. Z. Trans., xix, p. 47 (1886).

" " Ins. Nox. Agr. N. Z., p. 84 (1887).

Habitat.—New Zealand.

On Olearia haastii.

634. Eriochiton spinosus (Mask.).

Ctenochiton spinosus Mask., N. Z. Trans., xi, p. 212 (1878).

" " " " " xii, p. 292 (1879).

" " " " " xiv, p. 218 (1881).

" " " " " xvii, p. 25 (1884).

Eriochiton spinosus Mask., Ins. Nox. Agr. N. Z., p. 86 (1887).

Habitat.—New Zealand.

On *Atherosperma Novæ-Zelandiæ*; *Melicope ternata*; *Elæocarpus dentatus*; *Muhlenbeckia adpressa*.

635. *Eriochiton theæ* Green.

Eriochiton theæ Green, Ind. Mus. Notes, v, No. 1, p. 10 (1900).

Habitat.—India.

On tea-plant.

Genus **TAKAHASHIA** Ckll. Type, japonica.

s. g. *Takahashia* Ckll., Bull. 4, T. s., Dep. Ag., p. 47 (1896); g. Can. Ent., xxxi, p. 331 (1899).

636. *Takahashia jaliscensis* T. & W. Ckll.

Takahashia jaliscensis T. & W. Ckll., Ann. Mag. N. H., (7), x, p. 466 (1902).

Habitat.—Mexico.

On *Rhus*?

637. *Takahashia japonica* (Ckll.).

Pulvinaria (*Takahashia*) *japonica* Ckll., Psyche, vii, Suppl., i, p. 20 (1896).

“ “ “ “ Bull. 4, T. s., Dep. Ag., p. 47 (1896).

Takahashia japonica Kuw., Pr. Cal. Ac. Sci., (3), iii, p. 61 (1902).

Habitat.—Japan.

On mulberry.

Genus **PULVINARIA** Targ. Type, vitis.

Pulvinaria Targ., Catalogue, p. 34 (1869): Sign., Ann. Soc. Ent. Fr., (5), iii, p. 29 (1873): Ckll., Can. Ent., xxxi, p. 331 (1899).

s. g. *Protopulvinaria* Ckll., Jn. Trin. Nat. Club, i, p. 309 (1894). Type, convexa.

Pulvinella Hemp., Rev. Mus. Paul., iv, p. 480 (1900). Type, pulchella.

638. *Pulvinaria acericola* (Walsh & Riley).

Lecanium acericola Walsh & Riley, Am. Ent., i, p. 14 (1868).

“ “ Putn., Tr. Ia. Hor. Soc., p. 318 (1877).

“ “ Thom., 7th Rep. Ins. Ill., pp. 5, 120 (1878).

Pulvinaria “ Ckll., Check List, p. 329 (1896).

“ “ Howard, Bull. 22, n. s., Dep. Ag., p. 16 (1900).

“ “ Quaint. & Scott, Cocc. Amer., Dec. iii-iv, No. 6 (1901).

“ “ King, Can. Ent., xxxiv, p. 61 (1902).

Habitat.—Mass.; N. Y.; N. J.; D. C.; Tenn.; W. States.

On maple.

639. *Pulvinaria amygdali* Ckll.

Pulvinaria amygdali Ckll., Can. Ent., xxviii, p. 225 (1896).

“ “ Ckll. & Parr., The Industrialist, p. 281 (1899).

“ “ Quaint. & Scott, Cocc. Amer., Dec. iii-iv, No. 7 (1901).

Habitat.—New Mexico; Georgia.

On peach; apple; plum.

640. *Pulvinaria artemisiæ* Sign.

Pulvinaria artemisiæ Sign., Ann. Soc. Ent. Fr., (5), iii, p. 31 (1873).

Habitat.—France.

On *Artemisia*.

641. *Pulvinaria aurantii* Ckll.

Pulvinaria aurantii Ckll., Bull. 4, T. s., Dep. Ag., p. 48 (1896).

“ “ “ *Psyche*, vii, Suppl., i, p. 19 (1896).

“ “ “ *Annali di Agr.*, p. 103 (1898).

“ “ “ *Pr. Ac. N. Sci. Ph.*, p. 272 (1899).

“ “ *Kuw., Pr. Cal. Ac. Sci.*, (3), iii, p. 58 (1902).

Habitat.—Japan.

On orange; tea-plant; *Eurya ochnacea*.

642. *Pulvinaria betulæ* (Linn.).

Coccus betulæ Linn., *Syst. Nat.*, Ed. x, i, p. 455 (1758).

“ “ “ *Faun. Suec.*, Ed. ii, p. 265 (1761).

“ “ “ *Syst. Nat.*, Ed. xii, i, p. 740 (1766).

“ “ *Fab., Gen. Ins.*, p. 304 (1776).

“ “ *Mod., Act. Goth.*, i, p. 23 (1778).

“ “ *Fab., Spec. Ins.*, ii, p. 394 (1781).

“ “ “ *Mant. Ins.*, ii, p. 319 (1787).

“ “ *Gmel., Syst. Nat.*, p. 2216 (1789).

“ “ *DeVillers, Syst. Nat.*, p. 560 (1789).

Chermes “ *Oliv., Ency. Meth.*, vii, p. 442 (1792).

Coccus “ *Fab., Ent. Syst.*, iv, p. 226 (1794).

“ “ *Turton, Syst. Nat.*, p. 713 (1801).

“ “ *Fab., Syst. Rhyng.*, p. 308 (1803).

“ “ *Bechst., Forstins.*, i, p. 285 (1804).

Pulvinaria “ *Sign., Ann. Soc. Ent. Fr.*, (5), iii, p. 31 (1873).

Lecanium “ *Kalt., Die Pflanz.*, p. 610 (1874).

Pulvinaria “ *Dougl., Ent. Mon. Mag.*, xxvii, p. 98 (1891).

“ “ *Ckll., The Entom.*, xxxiv, p. 91 (1901).

Habitat.—Europe.

On *Betula alba*.

***Pulvinaria betulæ alni* Dougl.**

Pulvinaria betulæ var. *alni* Dougl., *Ent. Mon. Mag.*, xxvii, p. 100 (1891).

Habitat.—England.

On *Alnus glutinosa*.

643. *Pulvinaria bigeloviæ* Ckll.

Pulvinaria bigeloviæ Ckll., *Tr. Am. Ent. Soc.*, xx, p. 366 (1893).

“ “ “ *Pr. U. S. Nat. Mus.*, xvii, p. 623, note (1895).

“ “ “ *Pr. Ac. N. Sci. Ph.*, pp. 272, 273 (1899).

Habitat.—California; Colorado.

On *Bigelovia*.

Pulvinaria bigeloviae marmorata Ckll.

Pulvinaria marmorata Ckll., The Entom., xxxi, p. 130 (1898).

" *bigeloviae* var. *marmorata* Ckll., Check List, Suppl., p. 394 (1899).

Habitat.—New Mexico.

644. Pulvinaria broadwayi Ckll.

Pulvinaria broadwayi Ckll., Jn. Trin. Field Nat. Club, ii, p. 306 (1896).

" " " *Psyche*, vii, Suppl., i, p. 19 (1896).

Habitat.—Grenada.

645. Pulvinaria camelicola Sign.

Pulvinaria camelicola Sign., Ann. Soc. Ent. Fr., (5), iii, p. 32 (1873).

" *camelicola* Mask., N. Z. Trans., xi, p. 207 (1878).

" " Dougl., Ent. Mon. Mag., xxii, p. 159 (1885).

" " " " " " " " xxiii, p. 81 (1886).

" " " " " " " " p. 243 (1887).

" " Mask., Ins. Nox. Agr. N. Z., p. 83 (1887).

" " Riley & How., Ins. Life, v, p. 282 (1893).

" " Ckll., Can. Ent., xxvii, p. 258 (1895).

" " Green, Ent. Mon. Mag., xxxiii, p. 73 (1897).

" *camelicola* Berl. e Leon., Riv. Pat. Veg., vi, pp. 319, 321, 326 (1898).

" " " " " " " " Annali di Agr., p. 47 (1898).

" " " " " " " " Cherm. Ital., Fasc. iii, No. 70 (1898).

" *camelicola* Ckll., Pr. Ac. N. Sci. Ph., pp. 272, 273 (1899).

" " Green, Ind. Mus. Notes, v, p. 7 (1900).

Habitat.—Southern States; Europe; Australia; New Zealand; Japan.

On *Camellia*; *Euonymus*; *Oncidium papilio*; *Calanthe natalensis*.

646. Pulvinaria cariei de Charm.

Pulvinaria cariei de Charm., Pr. Soc. Amic. Scien., p. 41 (1899).

Habitat.—Mauritius.

647. Pulvinaria carpini (Linn.).

Coccus carpini Linn., Syst. Nat., Ed. x, i, p. 455 (1758).

" " " Faun. Suec., Ed. ii, p. 265 (1761).

Chermes " *serico albo* Geoff., Abr. Ins., i, p. 508 (1762).

? " *mespili* " " " " " " " " p. 508 (1762).

Coccus carpini Linn., Syst. Nat., Ed. xii, i, p. 740 (1766).

" " Fab., Gen. Ins., p. 304 (1776).

" " Mod., Act. Goth., p. 29 (1778).

" " Fab., Spec. Ins., ii, p. 394 (1781).

Chermes " Fourc., Ent. Par., i, p. 230 (1785).

? " *mespili* " " " " " " " " p. 230 (1885).

Coccus carpini Fab., Mant. Ins., ii, p. 319 (1787).

" " Gmel., Syst. Nat., Ed. xiii, p. 2216 (1789).

" " DeVillers, Syst. Nat., p. 560 (1789).

Chermes " Oliv., Ency. Meth., vii, p. 441 (1792).

? " *mespili* " " " " " " " " p. 441 (1792).

- Coccus carpini* Fab., Ent. Syst., iv, p. 226 (1794).
 “ “ Turton, Syst. Nat., p. 713 (1801).
 “ “ Fab., Syst. Rhyng., p. 309 (1803).
 “ “ Bechst., Forstins., i, p. 285 (1804).
 “ “ Leunis, Stett. Ent. Zeit., iii, p. 190 (1842).
 ? *Lecanium* “ Ratz., Forstins., iii, p. 194 (1844).
Pulvinaria “ Sign., Ann. Soc. Ent. Fr., (5), iii, p. 34 (1873).
 ? “ *mespili* Ckll., The Entom., xxxiv, p. 90 (1901).
 “ *carpini* “ “ “ “ p. 91 (1901).

Habitat.—Europe.

On *Carpinus*; *Mespilus*.

648. *Pulvinaria cestri* (Bouché).

- Lecanium cestri* Bouché, Schäd. Gart. Ins., p. 50 (1833).
Chermes “ Bdv., Ent. Hort., p. 336 (1867).
Pulvinaria “ Sign., Ann. Soc. Ent. Fr., (5), iii, p. 34 (1873).

Habitat.—France?

On *Cestrus*; *Hibiscus* and other *Malvaceæ*.

649. *Pulvinaria cockerelli* King.

- Pulvinaria cockerelli* King, Psyche, viii, p. 417 (1899).
 “ “ “ Can. Ent., xxxiv, p. 61 (1902).

Habitat.—Mass.

On *Spiræa salicifolia*; *Prinos verticillatus*.

650. *Pulvinaria convexa* (Hemp.).

- Protopulvinaria convexa* Hemp., Rev. Mus. Paul., iv, p. 485 (1900).
 “ “ “ Ann. Mag. N. H., (7), viii, p. 71 (1901).

Habitat.—Brazil.

On stems of *Smilax*.

651. *Pulvinaria cupaniæ* Ckll.

- Pulvinaria cupaniæ* Ckll., Tr. Ent. Soc. Lond., p. 159 (1893).
 “ “ “ Ins. Life, v, p. 159 (1893).
 “ “ “ Bull. Bot. Dep. Jam., ii, p. 101 (1895).
 “ “ “ Pr. Ac. N. Sci. Ph., pp. 272, 273 (1899).

Habitat.—Jamaica.

On *Cupania edulis*; *Bignonia magnifica*; guava, etc.

652. *Pulvinaria dendrophthoræ* (Ckll.).

- Lecanium dendrophthoræ* Ckll., Ins. Life, iv, p. 333 (1892).
Pulvinaria “ “ Tr. Ent. Soc. Lond., p. 162 (1893).
 “ “ “ Bull. Bot. Dep. Jam., ii, p. 102 (1895).

Habitat.—Jamaica.

On *Dendrophthora cupressoides*.

653. *Pulvinaria depressa* Hemp.

Pulvinaria depressa Hemp., Rev. Mus. Paul., iv, p. 490 (1900).

" " " Ann. Mag. N. H., (7), viii, p. 102 (1901).

Habitat.—Brazil.

On *Miconia*.

654. *Pulvinaria dodonææ* Mask.

Pulvinaria dodonææ Mask., N. Z. Trans., xxv, p. 222 (1892).

Habitat.—Australia.

On *Dodonæa bursarifolia*; *Myoporum*.

655. *Pulvinaria ehrhorni* King.

Pulvinaria ehrhorni King, Can. Ent., xxxiii, p. 145 (1901).

Habitat.—California.

On willow; alder.

656. *Pulvinaria ericæ* Loew.

Pulvinaria ericæ Loew, Wien. Ent. Zeit., ii, p. 115 (1883).

Habitat.—Austria.

On *Erica carnea*.

657. *Pulvinaria eugeniae* Hemp.

Pulvinaria eugeniae Hemp., Rev. Mus. Paul., iv, p. 488 (1900).

" " " Ann. Mag. N. H., (7), viii, p. 101 (1901).

Habitat.—Brazil.

On *Eugenia jaboticaba*.

658. *Pulvinaria evonymi* Gour.

Pulvinaria evonymi Gour., Ins. Inj. to Trees, p. 47 (1869).

" " " Sign., Ann. Soc. Ent. Fr., (5), iii, p. 35 (1873).

Habitat.—Europe.

On *Euonymus*.

659. *Pulvinaria ficus* Hemp.

Pulvinaria ficus Hemp., Rev. Mus. Paul., iv, p. 486 (1900).

" " " Ann. Mag. N. H., (7), viii, p. 100 (1901).

Habitat.—Brazil.

On *Ficus*; *Psidium*; *Mangifera*; *Ixora coccinea*.

660. *Pulvinaria flavicans* Mask.

Pulvinaria flavicans Mask., Tr. Roy. Soc. S. Austr., p. 103 (1888).

" " " Ckll., Pr. Ac. N. Sci. Ph., p. 272 (1899).

Habitat.—Australia.

661. *Pulvinaria floccifera* (Westw.).

Coccus floccifera Westw., Gard. Chron., p. 308 (1870).

Pulvinaria brassiæ Ckll., Can. Ent., xxvii, p. 135 (1895).

" *floccifera* Green, Ent. Mon. Mag., xxxiii, p. 72 (1897).

" " " Rep. Roy. Bot. Gard., Ceylon, p. 14 (1899).

Pulvinaria phaia Lull, Ent. News, x, p. 237 (1899).

“ “ Ckll., “ “ xi, p. 596 (1900).

“ *floccosa* Newst., Jn. Roy. Hor. Soc., xxiii, p. 26 (1900).

“ *floccifera* King, Can. Ent., xxxiii, p. 197 (1901).

“ *brassiae* King, Can. Ent., xxxiii, p. 197 (1901).

“ “ “ Ent. News, xii, p. 311 (1901).

“ *phaia* “ Can. Ent., xxxiv, p. 61 (1902).

Habitat.—England; India; Trinidad; Canada; Mass.

On *Auguloa clowesii*; *Lycaste skinneri*; *Camellia*; *Acalypha*; *Brassia verrucosa* (in greenhouses); *Phaius maculatus*.

662. *Pulvinaria fraxini* Sign.

Pulvinaria fraxini Sign., Ann. Soc. Ent. Fr., (5), iii, p. 36 (1873).

Habitat.—Europe.

On *Fraxinus excelsior*.

663. *Pulvinaria grandis* Hemp.

Pulvinaria grandis Hemp., Rev. Mus. Paul., iv, p. 491 (1900).

“ “ “ Ann. Mag. N. H., (7), viii, p. 103 (1901).

Habitat.—Brazil.

On Myrtaceæ.

664. *Pulvinaria hazeæ* Kuwana.

Pulvinaria hazeæ Kuw., Pr. Cal. Ac. Sci., (3), iii, p. 61 (1902).

Habitat.—Japan.

On *Rhus succedanea*.

665. *Pulvinaria horii* Kuwana.

Pulvinaria horii Kuw., Pr. Cal. Ac. Sci., (3), iii, p. 59 (1902).

Habitat.—Japan.

On *Acer trifidum*; *Æsculus turbinata*; *Kœlreuteria paniculata*.

666. *Pulvinaria hunteri* King.

Pulvinaria hunteri King, Can. Ent., xxxiii, p. 144 (1901).

Habitat.—Kansas.

On maple; honey-locust.

667. *Pulvinaria iceryi* (Guér.).

Le Pou á poche blanche Berg, Soc. d'Acclim., ix, p. 939 (1862) in part.

Gasteralphe Icery, Mem. sur le Poche blanche (1864) the female only.

Coccus iceryi Guér., Soc. d'Acclim. (1867).

Lecanium iceryi Sign., Ann. Soc. Ent. Fr., (4), viii, p. 857 (1868).

“ “ Guér., “ “ “ “ ix, p. 92 (1869).

“ “ Sign., “ “ “ “ “ p. 95 (1869).

“ “ “ Bull. “ “ “ “ “ p. xx (1869).

Pulvinaria gasteralphe Sign., Ann. Soc. Ent. Fr., (4), ix, p. 101 (1869).

“ *gasteralpha* “ “ “ “ “ (5), iii, p. 37 (1873).

“ “ Ckll., Check List, p. 330 (1896).

Habitat.—Mauritius; Reunion Islands.

On sugar cane.

668. *Pulvinaria innumerabilis* (Rathvon).*(Cottony maple scale.)*

- Coccus innumerabilis* Rath., Penn. Farm Journ., p. 256 (1854).
Lecanium acericorticis Fitch, 6th Rep. Ins. N. Y., p. 775 (1859).
 " *acerella* Rath., Lancaster Farmer, p. 101 (1876).
 " *acericorticis* Glover, Rep. U. S. Dep. Ag., 1876, p. 44 (1877).
 " " Smith, E. A., Can. Ent., x, p. 176 (1878).
 " " " " Am. Nat., xii, p. 655 (1878).
 " " Thom., 7th Rep. Ins. Ill., p. 121 (1878).
 " " Tr. Ill. Hor. Soc., p. 47 (1878).
 " " Lint., Coun. Gent., xlii, p. 471 (1878).
Pulvinaria innumerabilis Putn., Pr. Dav. Ac. N. Sci., p. 339 (1879).
 " " Riley, Am. Ent., iii, p. 149 (1880).
 " " Lint., 1st Rep. Ins. N. Y., pp. 301, 309, 310 (1882).
 " " Saund., Ins. Inj. to Fruits, p. 241 (1883).
 " " Comst., 2nd Rep. Dep. Ent. Corn. Univ., p. 137 (1883).
 " " Lint., Coun. Gent., xlvii, p. 541 (1883).
 " " " " " " xlviii, pp. 318, 556 (1884).
 " " Riley, Rep. U. S. Dep. Ag., p. 350 (1884).
 " " Osborn, Tr. Ia. Hor. Soc., p. 243 (1884).
 " " Uhler, St. Nat. Hist., ii, p. 217 (1884).
 " " Saund., Can. Ent., xvi, pp. 141, 210 (1884).
 " " Forbes, 13th Rep. Ins. Ill., p. 98 (1884).
 " " Lint., 2nd Rep. Ins. N. Y., p. 22 (1885).
 " " Saund., Rep. Ent. Soc. Ont., p. 27 (1885).
 " " Forbes, 14th Rep. Ins. Ill., p. 103 (1885).
 " " " 15th " " " " p. 6 (1889).
 " " Lint., 6th " " " " N. Y., p. 141 (1890).
 " " Pack., 5th Rep. U. S. Ent. Com., pp. 247, 412 (1890).
Lecanium acericorticis " " " " " " " p. 425 (1890).
 " " Lint., 6th Rep. Ins. N. Y., p. 142 (1890).
 " " " 7th " " " " p. 370 (1891).
Pulvinaria innumerabilis Murtf., Bull. 26, Div. Ent. Dep. Ag., p. 39 (1892).
 " " Garman, Bull. 40, Ky. Exp. Sta., p. 41 (1892).
 " " Lint., 8th Rep. Ins. N. Y., p. 110 (1893).
 " " Bruner, Rep. Neb. St. Hor. Soc., p. 225 (1893).
 " " Garman, Bull. 47, Ky. Exp. Sta., p. 52 (1893).
 " " Craw, 4th Bien. Rep. Cal. Bd. Hort., p. 97 (1894).
 " " Smith, Rep. N. J. Exp. Sta., p. 505 (1894).
 " " Lint., Bull. 13, N. Y. St. Mus., p. 272 (1895).
 " " Lugger, Bull. 43, Minn. Exp. Sta., p. 223 (1895).
 " " " Rep. Minn. Exp. Sta., p. 127 (1895).
 " " Comst., Man. Ins., p. 169 (1895).
 " " Smith, Econ. Ent., p. 111 (1896).
 " " Lint., 11th Rep. Ins. N. Y., p. 204 (1896).
 " " Hillman, Bull. 36, Nev. Exp. Sta., p. 35 (1897).

- Pulvinaria innumerabilis* Osborn, Contr. Ia. Ag. Coll., No. 3, p. 3 (1898).
 “ “ Gillette, Bull. 47, Col. Exp. Sta., p. 33 (1898).
 “ “ Felt, 14th Rep. Ins. N. Y., p. 239 (1898).
 “ “ Chambliss, Bull. 4, Tenn. Exp. Sta., p. 148 (1898).
 “ “ Felt, Bull. 17, n. s., Dep. Ag., p. 22 (1898).
 “ “ “ Rep. Com. Fish, Game & Forests, N. Y., p. 29 (1898).
 “ “ “ Bull. 27, N. Y. State Mus., p. 152 (1899).
 “ “ Newell, “ 43, Ia. Exp. Sta., p. 170 (1899).
 “ “ Ckll., The Industrialist, p. 281 (1899).
 “ “ King, Can. Ent., xxxi, p. 142 (1899).
 “ “ Lugg, 6th Rep. Minn. Exp. Sta., p. 219 (1900).
 “ “ Howard, Bull. 22, n. s., Dep. Ag., p. 7 (1900).
 “ “ Frank & Kruger, Schildlausbuch, p. 113 (1900).

Habitat.—Canada; U. S.

On maple; silver maple; linden; sycamore; locust; sumac; beech; elm; oak; apple; pear; orange; *Æsculus flava*; box-elder; spindle-tree; mulberry; alder; hawthorn; lilac; hackberry; *Aralia japonica*; *Viburnum dentatum*; grape; willow; etc.

669. *Pulvinaria linearis* Targ.

- Pulvinaria linearis* Targ., Annali di Agr., p. 398 (1884).
 “ “ Karsch, Ent. Nach., xi, p. 381 (1885).

Habitat.—Italy.

On *Camellia japonica*.

670. *Pulvinaria macluræ* (“Kenn.,” Fitch).

- Lecanium macluræ* “Kenn.,” Fitch, Coun. Gent., v, p. 38 (1855).
 “ “ Walsh & Riley, Am. Ent., i, p. 14 (1868).
 “ “ Pack., Guide to Study of Insects, p. 528 (1872).
 “ “ Thom., 7th Rep. Ins. Ill., p. 121 (1878).
 “ “ Putn., Pr. Dav. Ac. N. Sci., p. 340 (1879).
 “ “ Lint., 1st Rep. Ins. N. Y., p. 301 (1882).
 “ “ “ 6th “ “ “ “ p. 142 (1890).

Pulvinaria “ Ckll., Can. Ent., xxvi, p. 32 (1894).

Lecanium “ Lint., 11th Rep. Ins. N. Y., p. 205 (1896).

Pulvinaria “ King, Can. Ent., xxxi, p. 143 (1899).

Habitat.—Mass.; N. Y.; Pa.; Ohio; Ill.; New Mexico.

On osage-orange (*Maclura aurantiaca*); sumac.

671. *Pulvinaria mammeæ* Mask.

Pulvinaria mammeæ Mask., N. Z. Trans., xxvii, p. 59 (1894).

Habitat.—Hawaiian Islands; N. America.

On *Mammea americana*; ferns; orange; coffee; plum.

672. *Pulvinaria maskelli* Olliff.

Pulvinaria maskelli Olliff, Agr. Gaz. N. S. W., ii, p. 667 (1891).

“ “ Riley & How., Ins. Life, iv, pp. 294, 408 (1891).

Signoretia atriplicis Mask., N. Z. Trans., xxiv, p. 23 (1891).

Pulvinaria maskelli " " " xxvi, p. 76 (1893).

Signoretia atriplicis " " " " p. 80 (1893).

Habitat.—Australia.

On *Rhagodia hastata*; *Atriplex vesicaria*; *Atriplex nummularia*.

***Pulvinaria maskelli viminariae* Full.**

Pulvinaria maskelli var. *viminariae* Full., Notes on Cocc. W. Austr., p. 7 (1897).

" " " " " Tr. Ent. Soc. Lond., p. 458 (1899).

Habitat.—W. Australia.

On *Viminaria denudata*; *Hakea ilicifolia*.

***Pulvinaria maskelli nuytsiae* Mask.**

Pulvinaria nuytsiae Mask., N. Z. Trans., xxix, p. 313 (1897).

Ctenochiton? " Full., Notes on Cocc. W. Austr., p. 6 (1897) male.

" *maskelli* var. *nuytsiae* Ckll., Check List, Suppl., p. 394 (1899).

Pulvinaria nuytsiae Full., Tr. Ent. Soc. Lond., p. 458 (1899).

Habitat.—W. Australia.

On *Nuytsia floribunda*.

673. *Pulvinaria mesembrianthem* (Vall.).

— *mesembrianthem* Vall., Bull. de Ferussac, xxii, p. 469 (1830).

Calypiticus " Costa, Ann. Acad. Asp., Naples, p. 273 (1844).

Pulvinaria biplicata Targ., Catalogue, p. 34 (1869).

" *mesembrianthem* Sign., Ann. Soc. Ent. Fr., (5), iii, p. 39 (1873).

" " Dougl., Ent. Mon. Mag., xxiv, p. 24 (1887).

" " Berl. e Leon., Annali di Agr., p. 325 (1898).

" " " " Riv. Pat. Veg., vi, p. 325 (1898).

" " " " Cherm. Ital., Fasc. iii, No. 71 (1898).

Habitat.—Spain; Italy; France.

On *Mesembrianthemum*.

674. *Pulvinaria obscura* Newst.

Pulvinaria obscura Newst., Ind. Mus. Notes, iii, No. 5, p. 23 (1894).

Habitat.—Madras, India.

On *Hygrophila spinosa*.

675. *Pulvinaria occidentalis* Ckll.

(*Western Pulvinaria*.)

Pulvinaria innumerabilis var. *occidentalis* Ckll., The Entom., xxx, p. 13 (1897).

" *occidentalis* King, Can. Ent., xxxiii, p. 197 (1901).

Habitat.—Washington; Br. Columbia; Nova Scotia.

On currant; gooseberry; hawthorn; plum; pear; mountain ash; willow; poplar; alder.

676. *Pulvinaria oxyacanthæ* (Linn.).

Coccus oxyacanthæ Linn., Syst. Nat., Ed. x, i, 456 (1758).

" " " " " xii, i, p. 742 (1766).

" *cratægi* " " " " " " p. 742 (1766).

- Coccus cratægi* Fab., Syst. Ent., p. 744 (1775).
 " *oxyacanthæ* Mod., Act. Goth., p. 20 (1778).
 " *cratægi* Fab., Spec. Ins., ii, p. 395 (1781).
 " " " Mant. Ins., ii, p. 319 (1787).
 " *oxyacanthæ* Gmel., Syst. Nat., Ed. xiii, p. 2219 (1889).
Chermes cratægi Oliv., Ency. Meth., vii, p. 442 (1792).
Coccus " Fab., Ent. Syst., iv, p. 227 (1794).
 " " Turton, Syst. Nat., p. 714 (1801).
 " " Fab., Syst. Rhyng., p. 310 (1803).
 " *oxyacanthæ* Bechst., Forstins., i, p. 228 (1804).
 " " " " iii, p. 891 (1806).
 " *cratægi* Fonsc., Ann. Soc. Ent. Fr., iii, p. 214 (1834).
Pulvinaria oxyacanthæ Sign., Ann. Soc. Ent. Fr., (5), iii, p. 40 (1873).
Coccus cratægi Kalt., Die Pflanz., p. 204 (1874).
Lecanium oxyacanthæ Kalt., Die Pflanz., p. 213 (1874).
Coccus cratægi Sign., Ann. Soc. Ent. Fr., (5), vi, p. 613 (1876).
Pulvinaria oxyacanthæ Dougl., Ent. Mon. Mag., xxii, p. 158 (1885).
 " " " " " " " " xxvii, p. 307 (1891).
 Habitat.—Europe.
 On *Cratægus oxyacantha*.

677. *Pulvinaria oyamæ* Kuwana.

- Pulvinaria oyamæ* Kuw., Pr. Cal. Ac. Sci., (3), iii, p. 60 (1902).
 Habitat.—Japan.

678. *Pulvinaria paradelpha* Ckll. & Lidg.

- Pulvinaria paradelpha* Ckll. & Lidg., Victorian Naturalist, xvi, p. 15 (1899).
 Habitat.—Victoria.
 On *Acacia melanoxylon*.

679. *Pulvinaria populi* Sign.

- Pulvinaria populi* Sign., Ann. Soc. Ent. Fr., (5), iii, p. 42 (1873).
 Habitat.—France.

680. *Pulvinaria pruni* Hunter.

- Pulvinaria pruni* Hunter, Kan. Univ. Quar., ix, p. 104 (1900).
 Habitat.—Kansas.
 On plum; white elm.

681. *Pulvinaria psidii* Mask.

- Pulvinaria psidii* Mask., N. Z. Trans., xxv, p. 223 (1892).
 " " Howard, Ins. Life, vii, p. 426 (1895).
 " " Green, Ind. Mus. Notes, iv, No. 1, p. 8 (1896).
 " " Ckll., Bull. 4, T. s., Dep. Ag. p. 48 (1896).
 " " Craw, 5th Bien. Rep. Cal. Bd. Hort., p. 47 (1896).
 " " Berl. e Leon., Annali di Agr., p. 103 (1898).
 " " Ckll., Pr. Ac. N. Sci. Ph., pp. 272, 273 (1899).
 " " Kuw., Pr. Cal. Ac. Sci., (3), iii, p. 58 (1902).

Habitat.—New Zealand; Hawaiian Islands; Formosa; Ceylon; China; Japan; California.

On guava; tea; plum; coffee; ferns; Cinchona; Citrus; Pittosporum; Eurya japonica.

682. *Pulvinaria pulchella* Hemp.

Pulvinaria (*Pulvinella*) *pulchella* Hemp., Can. Ent., xxxi, p. 132 (1899).

Pulvinella " " Rev. Mus. Paul., iv, p. 481 (1900).

Habitat.—Brazil.

On *Baccharis dracunculifolia*.

683. *Pulvinaria pyriformis* Ckll.

Pulvinaria (*Protopulvinaria*) *pyriformis* Ckll., Jn. Trin. Nat. Club, i, p. 309 (1894).

" " " " " " " " ii, p. 307 (1896).

" newsteadi Leon., Riv. Pat. Veg., vi, p. 279 (1898).

" *pyriformis* Ckll., Psyche, viii, p. 311 (1899).

Protopulvinaria " Lefroy, Scale Ins. Less. Antil., p. 42 (1901).

Habitat.—Trinidad; Jamaica; Grenada; Madeira.

On guava; cinnamon; *Caprifolia*; *Cordea*, etc.

684. *Pulvinaria rhois* Ehrh.

Pulvinaria rhois Ehrh., Ent. News, ix, p. 186 (1898).

Habitat.—California.

On *Rhus diversiloba*.

685. *Pulvinaria sericea* (Fourc.).

Chermes quercus oblongus serico albo Geoff., Abr. Ins., p. 508 (1762).

" *sericea* Fourc., Ent. Paris., p. 230 (1785).

Coccus lanatus Gmel., Syst. Nat., Ed. xiii, p. 2221 (1789).

Chermes sericeus Oliv., Ency. Meth., vii, p. 441 (1792).

Coccus lanatus Bechst., Forstins., i, p. 289 (1804).

Pulvinaria marginata Targ., Catalogue, p. 34 (1869).

" *lanatus* Sign., Ann. Soc. Ent. Fr., (5), iii, p. 38 (1873).

" *sericea* Ckll., The Entom., xxxiv, p. 90 (1901).

Habitat.—Europe.

On oak.

686. *Pulvinaria simplex* King.

Pulvinaria simplex King, Mitth. Schw. Ent. Ges., (10), x, p. 475 (1902).

Habitat.—Switzerland.

On vines.

687. *Pulvinaria simulans* Ckll.

Pulvinaria simulans Ckll., Jn. Trin. Nat. Club, i, p. 310 (1894).

" " " Bull. Bot. Dep. Jam., p. 102 (1895).

Habitat.—Trinidad; Mexico.

688. *Pulvinaria tecta* Mask.

Pulvinaria tecta Mask., N. Z. Trans., xxvi, p. 79 (1893).

" " " " " xxviii, p. 393 (1896).

" " Ckll., Bull. 4, T. s., Dep. Agr., p. 49 (1896).

Habitat.—Australia.

On orange; *Acacia*; *Daviesia corymbosa*; *D. ulicina*.

689. *Pulvinaria tessellata* Green.

Pulvinaria tessellata Green, Ind. Mus. Notes, iv, p. 8 (1896).

Habitat.—Ceylon.

On *Ophiorrhiza pectinata*.

690. *Pulvinaria thompsoni* Mask.

Pulvinaria thompsoni Mask., N. Z. Trans., xxviii, p. 393 (1896).

Habitat.—Tasmania.

On *Dodonæa viscosa*.

691. *Pulvinaria tiliae* King & Ckll.

Pulvinaria innumerabilis var. *tiliae* King & Ckll., Psyche, viii, p. 286 (1898).

" " " " " Can. Ent., xxxi, p. 143 (1899).

" *tiliae* King, Can. Ent., xxxiii, p. 314 (1901).

Habitat.—Mass.

On *Tilia americana*.

692. *Pulvinaria tinsleyi* King.

Pulvinaria tinsleyi King, Can. Ent., xxxii, p. 360 (1900).

Habitat.—New Mexico.

On *Celtis*.

693. *Pulvinaria tomentosa* Green.

Pulvinaria tomentosa Green, Ind. Mus. Notes, iv, p. 8 (1896).

Habitat.—Ceylon.

694. *Pulvinaria tremulæ* Sign.

Pulvinaria tremulæ Sign., Ann. Soc. Ent. Fr., (5), iii, p. 45 (1873).

Habitat.—France.

On aspen.

695. *Pulvinaria*(?) *tuberculatus* (Bouché).

Coccus tuberculatus Bouché, Naturg. Ins., p. 18 (1834).

" " Burm., Handb. Ent., ii, p. 64 (1835).

" " Sign., Ann. Soc. Ent. Fr., (5), vi, p. 626 (1876).

" " Ckll., The Entom., xxxiv, p. 93 (1901).

Habitat.—South America?

On *Malvaceæ*.

696. *Pulvinaria urbicola* Ckll.

Pulvinaria urbicola Ckll., Tr. Ent. Soc. Lond., p. 160 (1893).

" " " Bull. Bot. Dep. Jam., p. 102 (1895).

" " " The Industrialist, p. 281 (1899).

Habitat.—Jamaica; Barbados; Trinidad.

On Capsicum.

697. *Pulvinaria viburni* King.

Pulvinaria viburni King, Can. Ent., xxxiii, p. 333 (1901).

Habitat.—Quebec, Canada.

On *Viburnum pubescens*.

698. *Pulvinaria vinifera* King.

Pulvinaria vinifera King, Mitth. Schw. Ent. Ges., (10), x, p. 481 (1903).

Habitat.—Switzerland.

On grape vine.

699. *Pulvinaria vitis* (Linn.).

— — Reaum., Mem. Ins., iv, p. 62, pl. vi, figs. 5-7 (1734).

Coccus vitis Linn., Syst. Nat., Ed. x, i, p. 456 (1758).

Chermes " oblongus Geoff., Abr. Ins., i, p. 506 (1762).

Coccus " Linn., Syst. Nat., Ed. xii, i, p. 741 (1766).

" " Fab., Syst. Ent., p. 744 (1775).

" " Mod., Act. Goth., iii, p. 20 (1778).

" " Schr., Enum. Ins. Austr., pp. 275, 584 (1781).

" " Fab., Spec. Ins., ii, p. 395 (1781).

Chermes " Fourc., Ent. Paris., p. 228 (1785).

Coccus " Fab., Mant. Ins., ii, p. 319 (1787).

" " Gmel., Syst. Nat., Ed. xiii, p. 2218 (1789).

Chermes " Oliv., Ency. Meth., vii, p. 439 (1792).

Coccus " Fab., Ent. Syst., iv, p. 227 (1794).

" " Turton, Syst. Nat., p. 714 (1801).

" " Schr., Faun. Boica, p. 144 (1801).

" " Fab., Syst. Rhyng., p. 310 (1803).

" " Haw., Tr. Ent. Soc. Lond., p. 297 (1812).

" " Major, Treat. Ins., pp. 110, 120, 240, 241 (1829).

" " Newm., Ent. Mag., i, p. 312 (1833).

" " Fonsc., Ann. Soc. Ent. Fr., iii, p. 214 (1834).

Calypticus spumosos Costa, Faun. Reg. Nap., Cocc., p. 10 (1835).

Coccus of the vine Curt., Ent. Mag., ii, p. 510 (1835).

" *vitis* Koll., Inj. Ins., p. 175 (1840).

Calypticus spumosos Harr., N. E. Farmer, xxiii, p. 4 (1843).

Lecanium vitis Fitch, 3rd Rep. Ins. N. Y., p. 387 (1856).

Calypticus spumosos Fauvel, Bull. Soc. Linn. Norm., viii, p. 290 (1864).

Coccus vitis Targ., Studii sul. Cocc., pp. 26, 30 (1867).

Lecanium vitis Walsh, Am. Ent., i, p. 14 (1868).

Pulvinaria " Targ., Catalogue, p. 34 (1869).

Lecanium vitis Riley, Am. Ent., ii, p. 276 (1870).

Pulvinaria " Sign., Ann. Soc. Ent. Fr., (5), iii, p. 45 (1873).

Coccus (*Lecanium*) *vitis* Kalt., Die Pflanz., p. 95 (1874).

Lecanium vitis Lint., Coun. Gent., xlv, p. 455 (1879).

Pulvinaria " Putn., Pr. Dav. Ac. Sci., p. 340 (1879).

" " Comst., 2nd Rep. Dep. Ent. Corn. Univ., p. 137 (1883).

" " Goethe, Jahrb. Nass. Ver. Nat., pp. 120, 129 (1884).

" *persicae* Newst., Ent. Mon. Mag., xxviii, p. 142 (1892).

" *vitis* Dougl., " " xxix, p. 263 (1893).

" " Saccardo, Riv. Pat. Veg., iv, p. 48 (1895).

" " Berl. e Leon., Riv. Pat. Veg., vi, pp. 321, 326 (1898).

" " " " Annali di Agr., p. 47 (1898).

" " Newst., Jn. Roy. Hor. Soc., xxiii, p. 26 (1900).

" " Frank & Kruger, Schildlausbuch, p. 111 (1900).

" " Ormerod, 24th Rep. Inj. Ins., p. 51 (1901).

" " Hofer, Mitth. Schw. Ent. Ges., (10), x, p. 482 (1903).

Habitat.—Europe; U. S.

On grape vine.

Pulvinaria vitis ribesiae Sign.

Pulvinaria ribesiae Sign., Ann. Soc. Ent. Fr., (5), iii, p. 43 (1873).

" " Goethe, Jahrb. Nass. Ver. Nat., p. 120 (1884).

" " Dougl., Ent. Mon. Mag., xxvi, p. 238 (1890).

" " Theobald, Ins. Life, London, p. 185 (1896).

" " Ckll., Pr. Ac. N. Sci. Ph., pp. 272, 273 (1899).

" " Newst., Jn. Roy. Hor. Soc., xxiii, p. 24 (1900).

" " Frank & Kruger, Schildlausbuch, p. 112 (1900).

" " Ormerod, 24th Rep. Inj. Ins., p. 48 (1901).

" *vitis* var. *ribesiae* Newst. in litt. to Ckll. (1902).

Habitat.—France; England; Germany.

On currant.

Genus **TECTOPULVINARIA** Hemp. Type, *albata*.

Tectopulvinaria Hemp., Rev. Mus. Paul., iv, p. 482 (1900); Ann. Mag. N. H., (7), viii, p. 69 (1901).

700. *Tectopulvinaria albata* Hemp.

Tectopulvinaria albata Hemp., Rev. Mus. Paul., iv, p. 483 (1900).

" " " Ann. Mag. N. H., (7), viii, p. 69 (1901).

Habitat.—Brazil.

On *Vernonia polyantha*; *Trichogonia salviaefolia*.

Genus **PSEUDOPULVINARIA** Atk. Type, *sikkimensis*.

Pseudopulvinaria Atk., Jn. Asiatic Soc. Bengal, pt. ii, No. 1, p. 58 (1889); Ckll., Can. Ent., xxxi, p. 331 (1899).

701. Pseudopulvinaria sikkimensis Atk.

Pseudopulvinaria sikkimensis Atk., Jn. Asiatic Soc. Bengal, pt. ii, No. 1, p. 58 (1889).

Pseudopulvinaria sikkimensis Atk., Ind. Mus. Notes, i, p. 6 (1889).

“ “ Cotes, “ “ “ ii, p. 169 (1893).

Habitat.—India.

On *Cinchona*.

Genus **PSEUDOPHILIPPIA** Ckll. Type, *quaintancii*.

Pseudophilippia Ckll., Psyche, viii, p. 89 (1898); Can. Ent., xxxi, p. 331 (1899).

702. Pseudophilippia quaintancii Ckll.

Pseudophilippia quaintancii Ckll., Psyche, viii, p. 90 (1898).

“ “ Quaint., “ “ p. 91 (1898).

Habitat.—Florida.

On pine.

Genus **MALLOCOCCUS** Mask. Type, *sinensis*.

|| *Mallophora* Mask., N. Z. Trans., xxix, p. 314 (1897).

Mallococcus “ “ “ xxx, p. 242 (1898); Ckll., Can. Ent., xxxi, p. 331 (1899).

703. Mallococcus(?) lanigerus (Hemp.).

Lecanium lanigerum Hemp., Rev. Mus. Paul., iv, p. 446 (1900).

“ “ “ Ann. Mag. N. H., (7), vii, p. 217 (1901).

Mallococcus lanigerus Ckll., “ “ “ “ ix, p. 452 (1902).

Habitat.—Brazil.

704. Mallococcus sinensis (Mask.).

Mallophora sinensis Mask., N. Z. Trans., xxix, p. 314 (1897).

Mallococcus “ Ckll., Check List, Suppl., p. 392 (1899).

Habitat.—China.

On *Callicarpa tomentosa*.

Genus **AUSTROLICHTENSIA** Ckll. Type, *hakearum*.

Austrolichtensia Ckll., Ann. Mag. N. H., (7), ix, p. 451 (1902).

705. Austrolichtensia hakearum (Full.).

Lecaniodiaspis(?) hakearum Full., Notes on Cocc. W. Austr., p. 7 (1897).

Lichtensia hakearum Ckll., Check List, Suppl., p. 395 (1899).

“ “ Full., Tr. Ent. Soc. Lond., p. 457 (1899).

Austrolichtensia hakearum Ckll., Ann. Mag. N. H., (7), ix, p. 451 (1902).

Habitat.—W. Australia.

On *Hakea media*.

Genus **LUZULASPIIS** Ckll. Type, *luzulæ*.

||Signoretia Targ., Catalogue, p. 34 (1869); Sign., Ann. Soc. Ent. Fr., (5), i, p. 426 (1871); Mask., N. Z. Trans., xxiv, p. 23 (1891); Ckll., Can. Ent., xxxi, p. 331 (1899).

Luzulaspis Ckll., Ann. Mag. N. H., (7), ix, p. 25 (1902).

706. *Luzulaspis luzulæ* (Dufour).

Aspidiotus(?) *luzulæ* Dufour, Ann. Soc. Ent. Fr., (4), iv, pp. 207, 208 (1864).

Signoretia clypeata Targ., Catalogue, p. 34 (1869).

" *luzulæ* Sign., Ann. Soc. Ent. Fr., (5), i, p. 427 (1871).

Aspidiotus " Kalt., Die Pflanz., p. 726 (1874).

Signoretia " Sign., Bull. Soc. Ent. Fr., (5), viii, p. cxviii (1878).

" " Newst., Ent. Mon. Mag., xxviii, p. 142 (1892).

" " Dougl., " " " xxx, p. 17 (1894).

Habitat.—England; Scotland; France; Australia.

On *Luzula maxima*; *L. campestris*.

***Luzulaspis luzulæ australis* (Mask.).**

Signoretia luzulæ var. Mask., N. Z. Trans., xxv, p. 223 (1892).

" " " *australis* Mask., N. Z. Trans., xxvi, p. 80 (1893).

" " " " Full., Tr. Ent. Soc. Lond., p. 457 (1899).

Habitat.—Australia.

On grasses and sedges.

Genus **EXÆRETOPUS** Newst. Type, *formiceticola*.

Exæretopus Newst., Ent. Mon. Mag., xxx, p. 204 (1894); Ckll., Can. Ent., xxxi, p. 331 (1899).

707. *Exæretopus caricis* Ehrh.

Exæretopus caricis Ehrh., Can. Ent., xxxiv, p. 193 (1902).

Habitat.—Mt. Shasta, Cal.

On *Carex breweri*; *Trisetum subspicatum*.

708. *Exæretopus formiceticola* Newst.

Exæretopus formiceticola Newst., Ent. Mon. Mag., xxx, p. 204 (1894).

Habitat.—England.

In nests of ants.

Genus **SPERMOCOCCUS** Giard. Type, *fallax*.

Spermococcus Giard, Bull. Soc. Ent. Fr., (7), iii, p. cxcix (1893); Ckll., Can. Ent., xxxi, p. 331 (1899).

709. *Spermococcus fallax* Giard.

Spermococcus fallax Giard, Bull. Soc. Ent. Fr., (7), iii, p. cxcix (1893).

" " Berl., Riv. Pat. Veg., iii, p. 366 (1895).

Habitat.—France.

On roots of grass.

Genus **LICHTENSIA** Sign. Type, viburni.

Lichtensia Sign., Ann. Soc. Ent. Fr., (5), iii, p. 27 (1873): Ckll., Can. Ent., xxxi, p. 331 (1899).

710. *Lichtensia argentata* Hemp.

Lichtensia argentata Hemp., Rev. Mus. Paul., iv, p. 492 (1900).

“ “ “ Ann. Mag. N. H., (7), viii, p. 104 (1901).

Habitat.—Brazil.

711. *Lichtensia colimensis* Ckll.

Lichtensia colimensis Ckll., Ann. Mag. N. H., (7), x, p. 467 (1902).

Habitat.—Mexico.

On *Celtis*?

712. *Lichtensia crescentiæ* Ckll.

Lichtensia crescentiæ Ckll., Ann. Mag. N. H., (7), i, p. 435 (1898).

Habitat.—Mexico.

On “Guanabano.”

713. *Lichtensia eatoni* Newst.

Lichtensia eatoni Newst., Ent. Mon. Mag., xxxi, p. 166 (1895).

Habitat.—Algeria.

On olive; *Phillyrea media*.

714. *Lichtensia ephedræ* Newst.

Lichtensia ephedræ Newst., Ent. Mon. Mag., xxxvii, p. 83 (1901).

Habitat.—Egypt.

On *Ephedra alte*.

715. *Lichtensia lutea* (Ckll.).

Pulvinaria lutea Ckll., Ann. Mag. N. H., (6), xii, pp. 51, 160 (1893).

Lichtensia “ “ *Psyche*, vii, p. 255 (1895).

Habitat.—Mexico.

On wild fig; *Croton*.

716. *Lichtensia lycii* Ckll.

Lichtensia lycii Ckll., *Psyche*, vii, p. 254 (1895).

Habitat.—New Mexico.

On “*Lycium* bush.”

717. *Lichtensia mimosæ* Towns. & Ckll.

Lichtensia mimosæ Towns. & Ckll., Jn. N. Y. Ent. Soc., vi, p. 175 (1898).

Habitat.—Mexico.

On *Mimosa*.

718. *Lichtensia parvula* (Ckll.).

Pulvinaria parvula Ckll., Biol. Centr. Amer., ii, pt. 2, p. 19 (1899).

Habitat.—Mexico.

On *Mimosa*.

719. Lichtensia simillima Ckll.

Lichtensia simillima Ckll., Can. Ent., xxxiv, p. 90 (1902).

Habitat.—Paraguay.

720. Lichtensia viburni Sign.

Lichtensia viburni Sign., Ann. Soc. Ent. Fr., (5), iii, p. 28 (1873).

“ “ Dougl., Ent. Mon. Mag., xxiv, p. 167 (1887).

“ “ Newst., “ “ “ xxxi, p. 165 (1895).

“ “ Ckll., Psyche, vii, p. 255 (1895).

“ “ Berl. e Leon., Cherm. Ital., Fasc. iii, No. 62 (1898).

“ “ King, Can. Ent., xxxi, p. 143 (1899).

Habitat.—France; England; Wales; Mass.

On *Viburnum Tinus*; *Spiræa salicifolia*; *Prinos verticillatus*; *Hedera helix*.

721. Lichtensia zapotlana Ckll.

Lichtensia zapotlana Ckll., Ann. Mag. N. H., (7), x, p. 467 (1902).

Habitat.—Mexico.

***Lichtensia zapotlana townsendi* Ckll.**

Lichtensia zapotlana var. *Townsendi* Ckll., Ann. Mag. N. H., (7), xi, p. 162 (1903).

Habitat.—Mexico.

On copal.

Genus PHILEPHEDRA Ckll. Type, ephedræ.

Philephedra Ckll., Can. Ent., xxxi, p. 331 (1899); Ann. Mag. N. H., (7), ix, p. 451 (1902).

722. Philephedra ephedræ (Ckll.).

Pulvinaria ephedræ Ckll., Ann. Mag. N. H., (7), ii, p. 24 (1898).

Philephedra “ “ “ “ “ ix, p. 451 (1902).

Habitat.—New Mexico.

On *Ephedra*.

Genus ERIOPELTIS Sign. Type, lichtensteinii.

Eriopeltis Sign., Ann. Soc. Ent. Fr., (5), i, p. 429 (1871); Ckll., Can. Ent., xxxi, p. 332 (1899).

723. Eriopeltis brachypodii Giard.

Eriopeltis brachypodii Giard, Bull. Soc. Ent. Fr., (7), iii, p. cxcix (1893).

“ “ Butler, “ Knowledge,” p. 148 (1894).

“ “ Fletcher, Rep. Can. Exp. Farms, p. 146 (1896).

Habitat.—France.

On *Brachypodium pinnatum*.

724. Eriopeltis festucae (Fonsc.).

Coccus festucae Fonsc., Ann. Soc. Ent. Fr., iv, p. 216 (1834).

“ “ Kalt., De Pflanz., p. 747 (1874).

Eriopeltis “ Sign., Ann. Soc. Ent. Fr., (5), ix, p. 46 (1879).

“ “ King, Can. Ent., xxxiii, p. 197 (1901).

Habitat.—Europe; Nova Scotia; Canada; Illinois; Indiana; Dakota.
On *Festuca caespitosa*; *F. phœnicoides*.

725. Eriopeltis lichtensteinii Sign.

|| *Eriopeltis festucae* Sign. (non Fonsc.), Ann. Soc. Ent. Fr., (5), i, p. 430 (1871).

“ *lichtensteinii* Sign., Ann. Soc. Ent. Fr., (5), vi, p. 607 (1876).

“ “ “ Bull. “ “ “ “ “ vii, p. xxxvi (1877).

“ *festucae* “ “ “ “ “ “ “ “ “ (1877).

“ “ Bignell, The Entom., xviii, p. 286 (1885).

“ *lichtensteinii* Dougl., Ent. Mon. Mag., xxiv, p. 166 (1887).

“ “ Newst., “ “ “ “ “ xxvii, p. 165 (1891).

“ *festucae* Butler, “Knowledge,” p. 148 (1894).

“ “ Fletcher, Rep. Can. Exp. Farms, p. 146 (1896).

Habitat.—France; Holland; England; Scotland.

On *Festuca* spp. and other grasses.

Genus **FILIPPIA** Targ. Type, *oleæ*.

|| *Philippia* Targ., Studii sul. Cocc., p. 13 (1867); Sign., Ann. Soc. Ent. Fr., (4), viii, p. 854 (1868); ix, p. 101 (1869); (5), i, p. 433 (1871).

Filippia Targ., Catalogue, p. 33 (1869); Kll., Check List, p. 329 (1896); Can. Ent., xxxi, p. 332 (1899).

726. Filippia oleæ (Costa).

Coccus oleæ Costa, Degli Ins. del. Olivo, p. 71, pl. 4, fig. 1 (1828).

Philippia follicularis Targ., Studii sul. Cocc., p. 23 (1867).

Filippia “ “ Catalogue, p. 33 (1869).

Philippia oleæ Sign., Ann. Soc. Ent. Fr., (5), i, p. 433 (1871).

“ “ Licht., Bull. “ “ “ “ (6), i, p. cxiv (1881).

“ “ Kll., Check List, p. 329 (1896).

Habitat.—Italy.

On olive.

Genus **ERICERUS** Guérin. Type, *pe-là*.

Ericerus Guér., Bull. Soc. Ent. Fr., (3), vi, p. lxxvii (1858); Sign., Ann. Soc. Ent. Fr., (5), iv, p. 90 (1874).

Pela Targ., Studii sul. Cocc., p. 19 (1867).

727. Ericerus pe-la (Chav.).

Coccus pe-là Chav., Ann. Soc. Ent. Fr., (2), vi, p. 144 (1848).

Ceroplastes cereus Walk., Cat. Br. Mus., Hom., p. 1087 (1852).

Coccus pe-là Westw., Gard. Chron., pp. 484, 532 (1853).

Ericerus " Guér., Bull. Soc. Ent. Fr., (3), vi, p. lxxvii (1858).

" " Sign., Ann. " " (4), ix, p. 102 (1869).

Coccus " Silliman, Am. Nat., v, p. 683 (1871).

Ericerus " Sign., Ann. Soc. Ent. Fr., (5), iv, p. 91 (1874).

" " Blanch., Les Coccides utiles, p. 28 (1883).

" " Comst., Intr. Ent., p. 136 (1888).

" " Cotes, Ind. Mus. Notes, ii, p. 91 (1891).

" " Comst., Man. Ins., p. 166 (1895).

" " Green, Cocc. Ceylon, pt. i, p. 3 (1896).

" " Howard, Bull. 9, n. s., Dep. Ag., p. 39 (1897).

" " Smithers, Pharmaceutical Era, No. 8 (1897).

" " Kuw., Pr. Cal. Ac. Sci., (3), iii, p. 62 (1902).

Habitat.—Europe; China; Japan.

On *Rhus succedanea*; *Ligustrum glabrum*; *Hibiscus syriacus*; *Fraxinus*.

Genus **LECANOCHITON** Mask. Type, *metrosideri*.

Lecanochiton Mask., N. Z. Trans., xiv, p. 222 (1881); Ins. Nox. Agr. N. Z., p.

67 (1887); Ckll., Can. Ent., xxxi, p. 332 (1899).

728. *Lecanochiton metrosideri* Mask.

Lecanochiton metrosideri Mask., N. Z. Trans., xiv, p. 222 (1881):

" " " " " xvi, p. 129 (1883).

" " " Ins. Nox. Agr. N. Z., p. 64 (1887).

Habitat.—New Zealand.

On *Metrosideros robusta*; *M. tomentosa*.

729. *Lecanochiton minor* Mask.

Lecanochiton minor Mask., N. Z. Trans., xxiii, p. 12 (1890).

Habitat.—New Zealand.

On *Metrosideros robusta*.

Genus **CEROPLASTES** Gray. Type, *janeirensis*.

Ceroplastes Gray, Spicilegia Zoologica, p. 7, pl. 3, figs. 6-7 (1830): Sign.,

Ann. Soc. Ent. Fr., (5), ii, p. 35 (1872): Comst., Rep. U. S. Dep. Ag., 1880, p.

330 (1881): Mask., N. Z. Trans., xxv, p. 214 (1892): Ckll., Can. Ent.,

xxxii, p. 332 (1899): Hemp., Rev. Mus. Paul., iv, p. 450 (1900).

Columnnea Targ., Studii sul. Cocc., p. 11 (1867); Catalogue, p. 35 (1869);

Coccin. deg. Agrumi in Ital., p. 12 (1891).

730. *Ceroplastes actiniformis* Green.

Ceroplastes actiniformis Green, Ind. Mus. Notes, iv, p. 8 (1896).

Habitat.—Ceylon.

On cocoanut palm.

731. *Ceroplastes africanus* Green.

Ceroplastes africanus Green, Ann. Mag. N. H., (7), iv, p. 188 (1899).

Habitat.—Cape Colony; Natal.

On *Acacia*.

732. *Ceroplastes albolineatus* Ckll.

Ceroplastes albolineatus Ckll., Ent. News, v, p. 157 (1894).

“ “ “ Bull. Bot. Dep. Jam., pp. 7, 100 (1895).

“ “ “ Rev. Mus. Paul., ii, p. 70 (1897).

“ “ Hemp., “ “ “ iv, p. 474 (1900).

Habitat.—Jamaica; Mexico; Brazil.

On *Baccharis*; *Schinus*; *Fuchsia*; *Maytenus*.

***Ceroplastes albolineatus vulcanicus* Ckll.**

Ceroplastes albolineatus var. *vulcanicus* Ckll., Ann. Mag. N. H., (7), xi, p. 160 (1903).

Habitat.—Mexico.

733. *Ceroplastes amazonicus* Hemp.

Ceroplastes amazonicus Hemp., Rev. Mus. Paul., iv, p. 454 (1900).

“ “ “ Ann. Mag. N. H., (7), vii, p. 556 (1901).

Habitat.—Brazil.

734. *Ceroplastes angulatus* Ckll.

Ceroplastes angulatus Ckll., Ann. Mag. N. H., (7), i, p. 434 (1898).

Habitat.—Mexico.

735. *Ceroplastes australiae* Walk.

Ceroplastes australiae Walk., Cat. Br. Mus., Hom., iv, p. 1087 (1852).

“ *australasie* Sign., Ann. Soc. Ent. Fr., (5), ii, p. 45 (1872).

“ “ Ckll., Ann. Mag. N. H., (7), iv, p. 191 (1899).

Habitat.—Australia.

736. *Ceroplastes bergi* Ckll.

Ceroplastes bergi Ckll., Commun. Mus. Buen. Aires, i, No. 8, p. 288 (1901).

Habitat.—Buenos Ayres.

737. *Ceroplastes bernardensis* Ckll.

Ceroplastes bernardensis Ckll., Can. Ent., xxxiv, p. 93 (1902).

Habitat.—Paraguay.

738. *Ceroplastes bicolor* Hemp.

Ceroplastes bicolor Hemp., Ann. Mag. N. H., (7), viii, p. 390 (1901).

Habitat.—Brazil.

739. *Ceroplastes brachyurus* Ckll.

Ceroplastes brachyurus Ckll., Ann. Mag. N. H., (7), xi, p. 157 (1903).

Habitat.—Mexico.

“ On branches of shrub with small pinnate leaves like *Rhus*.”

740. *Ceroplastes bruneri* Ckll.

Ceroplastes bruneri Ckll., Can. Ent., xxxiv, p. 91 (1902).

Habitat.—Paraguay.

741. *Ceroplastes campinensis* Hemp.

Ceroplastes campinensis Hemp., Ann. Mag. N. H., (7), viii, p. 389 (1901).

Habitat.—Brazil.

On guava (*Psidium*).

742. *Ceroplastes candela* Ckll. & King.

Ceroplastes candela Ckll. & King, The Entom., xxxv, p. 113 (1902).

Habitat.—Natal.

743. *Ceroplastes cassiæ* (Chav.).

Coccus cassiæ Chav., Ann. Soc. Ent. Fr., (2), vi, p. 141 (1848).

Ceroplastes Gray Targ., Catalogue, p. 35 (1869).

“ *cassiæ* Sign., Ann. Soc. Ent. Fr., (5), ii, p. 43 (1872).

“ “ Ckll., The Entom., xxvi, p. 80 (1893).

“ “ Rev. Mus. Paul., ii, p. 70 (1897).

“ “ Hemp., “ “ “ iv, p. 452 (1900).

Habitat.—Europe; Antigua; Brazil.

On Cassia; *Bursera gummifera*.

744. *Ceroplastes ceriferus* (Anderson).

Coccus ceriferus Anderson, Mon. Cocci ceriferi (1791).

“ “ Fab., Ent. Syst., Suppl., p. 546 (1798).

“ “ “ Syst. Rhyng., p. 311 (1803).

Ceroplastes chilensis Gray, Spicilegia Zoologica, p. 7 (1830).

“ “ A. White, Ann. Mag. N. H., xvii, p. 333 (1846).

Coccus ceriferus Chav., Ann. Soc. Ent. Fr., (2), vi, p. 144 (1848).

“ “ Westw., Gard. Chron., p. 484 (1853).

Ceroplastes “ Sign., Ann. Soc. Ent. Fr., (5), ii, p. 40 (1872).

“ *chilensis* “ “ “ “ “ “ p. 44 (1872).

“ *ceriferus* Blanch., Les Coccides utiles, p. 26 (1883).

“ “ Atk., Ind. Mus. Notes, i, p. 189 (1890).

“ “ Cotes, “ “ “ ii, No. 3, pp. 91, 93 (1891).

“ “ Mask., N. Z. Trans., xxv, p. 216 (1892).

“ “ Ckll., Bull. Bot. Dep. Jam., p. 7 (1895).

“ “ Newst., Ind. Mus. Notes, iii, No. 5, p. 21 (1896).

“ “ Craw, 5th Bien. Rep. Cal. Bd. Hort., p. 44 (1896).

“ “ Green, Cocc. Ceylon, pt. 1, p. 3 (1896).

“ “ Howard, Bull. 9, n. s., Dep. Ag., p. 39 (1897).

“ “ Frog., Rep. Dep. Ag. N. S. W., No. 175, p. 2 (1897).

“ “ Ckll., Ann. Mag. N. H., (7), iv, p. 190 (1899).

“ *chilensis* “ “ “ “ “ “ p. 191 (1899).

“ *ceriferus* Kuw., Pr. Cal. Ac. Sci., (3), iii, p. 62 (1902).

Habitat.—India; Australia; Ceylon; Japan; Hawaiian Islands; Chili; Mexico; Antigua; Jamaica.

On *Myrica cerifera*; *Melaleuca*; *Hibiscus*; *Camellia*; *Gardenia*; tea; mango; orange, etc.

745. *Ceroplastes cirripediformis* Comst.

(*Barnacle scale*.)

Ceroplastes cirripediformis Comst., Rep. U. S. Dep. Ag., 1880, p. 333 (1881).

“ “ “ 2d Rep. Dep. Ent. Corn. Univ., p. 130 (1883).

“ “ Saund., Ins. Inj. to Fruits, p. 402 (1883).

“ “ Hubbard, Ins. Aff. Orange, p. 59 (1885).

“ “ Comst., Intr. Ent., pp. 143, 144 (1888).

“ “ Morg., Spec. Bull. La. Exp. Sta., p. 78 (1893).

“ “ Ckll., The Entom., xxvi, p. 81 (1893).

“ “ Howard, Ins. Life, vii, p. 280 (1894).

“ “ Ckll., Bull. Bot. Dep. Jam., p. 5 (1895).

“ “ Marl., Yearbook U. S. Dep. Ag., p. 278 (1900).

Habitat.—Florida; Louisiana; Mexico; West Indies.

On orange; quince; myrtle; persimmon; *Solanum*; *Lignum-vitæ*; *Eupatorium*, etc.

746. *Ceroplastes cistudiformis* Towns. & Ckll.

Ceroplastes psidii subsp. *cistudiformis* Ckll., Zoe, iii, p. 256 (1892).

“ *cistudiformis* Ckll., Zoe, iv, p. 104 (1893).

“ “ “ The Entom., xxxi, pp. 119, 141 (1898).

Habitat.—Mexico; California.

On *Chysis aurea*; *Bignonia*; *Chrysanthemum*; *Cordia boissieri*; “Avo-cado pear;” “pepper-tree.”

747. *Ceroplastes coloratus* Ckll.

Ceroplastes coloratus Ckll., Ann. Mag. N. H., (7), i, p. 435 (1898).

Habitat.—Mexico.

On “Crucetilla.”

748. *Ceroplastes communis* Hemp.

Ceroplastes communis Hemp., Rev. Mus. Paul., iv, p. 459 (1900).

“ “ “ Ann. Mag. N. H., (7), vii, p. 560 (1901).

Habitat.—Brazil.

On *Maytenus*.

749. *Ceroplastes confluens* Ckll. & Tins.

Ceroplastes confluens Ckll. & Tins., Jn. Inst. Jam., ii, p. 468 (1897).

“ “ Hemp., Rev. Mus. Paul., iv, p. 460 (1900).

Habitat.—Jamaica; Brazil.

On *Ingaseiro*; *Mimosa*.

750. *Ceroplastes cultus* Hemp.

Ceroplastes cultus Hemp., Rev. Mus. Paul., iv, p. 470 (1900).
 " " " Ann. Mag. N. H., (7), viii, p. 65 (1901).

Habitat.—Brazil.

On *Erigeron canadensis*.

751. *Ceroplastes cuneatus* Hemp.

Ceroplastes cuneatus Hemp., Rev. Mus. Paul., iv, p. 471 (1900).
 " " " Ann. Mag. N. H., (7), viii, p. 66 (1901).

Habitat.—Brazil.

On *Erigeron canadensis*.

752. *Ceroplastes denudatus* Ckll.

Ceroplastes denudatus Ckll., The Entom., xxvi, p. 82 (1893).
 " " " Bull. Bot. Dep. Jam., p. 6 (1895).

Habitat.—Antigua; Demerara.

On *Anona muricata*; *Croton*?

753. *Ceroplastes depressus* Ckll.

Ceroplastes sp.? Ckll., Journ. Inst. Jam., i, p. 179 (1893).
 " depressus " The Entom., xxvi, p. 81 (1893).
 " " " Bull. Bot. Dep. Jam., p. 6 (1895).

Habitat.—Jamaica.

On *Lignum-vitæ*.

754. *Ceroplastes dugesii* "Licht.," Towns.

Ceroplastes dugesii Licht., Bull. Soc. Ent. Fr., (6), v, p. cxli (1885) no desc.
 " " Towns., Zoe, iii, p. 255 (1892).
 " " Ckll., Biol. Centr. Amer., ii, pt. 2, p. 18 (1899).

Habitat.—Mexico: Lesser Antilles.

On *Malvaviscus arboreus*; *M. acerifolius*; *Hibiscus*; *Laurel rose*.

755. *Ceroplastes egbarum* Ckll.

Ceroplastes egbarum Ckll., The Entom., xxxii, p. 127 (1899).
 " cristatus Green, Ann. Mag. N. H., (7), iv, p. 190 (1899).
 " egbarum Ckll., " " " " v, pp. 158, 159 (1900).

Habitat.—W. Africa.

On *Mimosa*.

***Ceroplastes egbarum fulleri* T. & W. Ckll.**

Ceroplastes egbarum subsp. *fulleri* T. & W. Ckll., The Entom., xxxv, p. 113 (1902).

Habitat.—Natal.

On *Mimosa*; *Acacia*.

756. *Ceroplastes euphorbiæ* Ckll.

Ceroplastes euphorbiæ Ckll., Psyche, vii, Suppl., i, p. 17 (1896).

Habitat.—Jamaica.

On *Euphorbia hypericifolia*.

757. *Ceroplastes fairmairii* Targ.

Ceroplastes fairmairii Targ., Catalogue, p. 25 (1869).

" " Sign., Ann. Soc. Ent. Fr., (5), ii, p. 43 (1872).

" " Ckll., Ann. Mag. N. H., (7), iii, p. 170 (1899).

" " " " " " " " ix, p. 455 (1902).

Habitat.—Europe; Brazil.

On clove-tree.

758. *Ceroplastes floridensis* Comst.

(*Florida wax scale*.)

Ceroplastes floridensis Comst., Rep. U. S. Dep. Ag., 1880, p. 331 (1881).

" rusci Ashm. (non Linn.), Can. Ent., xii, p. 252 (1880).

" floridensis Voyle, Bull. 1, Div. Ent. Dep. Ag., p. 20 (1883).

" " Comst., 2nd Rep. Dep. Ent. Corn. Univ., p. 131 (1883).

" " Saund., Ins. Inj. to Fruits, p. 402 (1883).

" rusci Uhler, St. Nat. Hist., ii, p. 216 (1884).

" floridensis Hubbard, Ins. Aff. the Orange, p. 56 (1885).

" " Comst., Intr. Ent., pp. 143, 144 (1888).

" " Riley, Ins. Life, i, p. 326 (1889).

" " Riley & How., Ins. Life, ii, pp. 55, 316 (1889-90).

" " Morg., Spec. Bull. La. Exp. Sta., p. 66 (1893).

" " Ckll., The Entom., xxvi, p. 80 (1893).

" " Riley & How., Ins. Life, vi, p. 347 (1894).

" " Ckll., Bull. Bot. Dep. Jam., p. 5 (1895).

" " Howard, Bull. 9, n. s., Dep. Ag., p. 39 (1897).

" " Rolfs & Quaint., Cocc. Amer., Dec. i-ii, No. 7 (1898).

" " Ckll., Ann. Mag. N. H., (7), iv, p. 191 (1899).

" " Marl., Yearbook U. S. Dep. Ag., p. 277 (1900).

" " Gossard, Bull. 51, Fla. Exp. Sta., p. 117 (1900).

" " Kuw., Pr. Cal. Ac. Sci., (3), iii, p. 62 (1902).

Habitat.—Fla.; La.; Cal.; Mex.; West Indies; Hawaiian Islands; Ceylon; India; Brazil; Darjeeling; Assam; Japan; Australia.

On Oleander; Citrus; quince; red bay; myrtle; lignum-vitæ; pomegranate; mango; guava; fig; tea; Ilex glabra; Anona reticulata; Andromeda; Anthurium; etc.

759. *Ceroplastes formicarius* Hemp.

Ceroplastes formicarius Hemp., Rev. Mus. Paul., iv, p. 472 (1900).

" " " Ann. Mag. N. H., (7), viii, p. 67 (1901).

Habitat.—Brazil.

On Maytenus.

760. *Ceroplastes formosus* Hemp.

Ceroplastes formosus Hemp., Rev. Mus. Paul., iv, p. 468 (1900).

" " " Ann. Mag. N. H., (7), viii, p. 64 (1901).

Habitat.—Brazil.

On Eugenia.

761. Ceroplastes grandis Hemp.

Ceroplastes grandis Hemp., Rev. Mus. Paul., iv, p. 455 (1900).

" " " Ann. Mag. N. H., (7), vii, p. 557 (1901).

Habitat.—Brazil.

On *Zanthoxylum*; *Baccharis*; *Ilex*; *Psidium*.

762. Ceroplastes iheringi Ckll.

Ceroplastes iheringi Ckll., The Entom., xxviii, p. 100 (1895).

" " " Rev. Mus. Paul., ii, p. 70 (1897).

" " Hemp., " " " iv, p. 452 (1900).

Habitat.—Brazil.

On *Baccharis platensis*; *B. dracunculifolia*.

763. Ceroplastes irregularis Ckll.

Ceroplastes irregularis Ckll., The Entom., xxvi, p. 351 (1893).

" " " Science, xxii, p. 151 (1893).

" artemisiarum " Ann. Mag. N. H., (6), xii, p. 160 (1893) no desc.

" irregularis " " " " " xv, p. 209 (1895).

" " " The Entom., xxxiii, p. 201 (1900).

Habitat.—Mexico; New-Mexico; California; Texas.

On *Atriplex confertifolia*; *A. canescens*.

Ceroplastes irregularis rubidus Ckll.

Ceroplastes irregularis var. *rubidus* Ckll., Jn. N. Y. Ent. Soc., iv, p. 203 (1896).

Habitat.—New Mexico.

On *Atriplex canescens*.

764. Ceroplastes jamaicensis A. White.

Ceroplastes jamaicensis A. White, Ann. Mag. N. H., xvii, p. 333 (1846).

" " Westw., Gard. Chron., p. 484 (1853).

" " Sign., Ann. Soc. Ent. Fr., (5), ii, p. 45 (1872).

" " McIntire, Jn. Quekett Micr. Club, p. 24 (1889).

" " Ckll., The Entom., xxvi, p. 81 (1893).

" " Bull. Bot. Dep. Jam., p. 6 (1895).

Habitat.—Jamaica; Br. Guiana.

On lance-wood.

765. Ceroplastes janeirensis Gray.

Ceroplastes janeirensis Gray, Spicilegia Zoologica, p. 7, pl. 3, fig. 6 (1830).

" " A. White, Ann. Mag. N. H., xvii, p. 333 (1846).

" " Westw., Gard. Chron., p. 484 (1853).

" " Targ., Atti dei Georgofili, n. s., xiii, p. 33 (1866).

" " " Studii sul. Cocc., p. 28 (1867).

" " Sign., Ann. Soc. Ent. Fr., (5), ii, p. 42 (1872).

" " Hemp., Rev. Mus. Paul., iv, p. 451 (1900).

Habitat.—Europe; Brazil.

On Myrtaceæ.

766. *Ceroplastes lucidus* Hemp.

Ceroplastes lucidus Hemp., Rev. Mus. Paul., iv, p. 465 (1900).

“ “ “ Ann. Mag. N. H., (7), viii, p. 62 (1901).

Habitat.—Brazil.

On *Baccharis dracunculifolia*.

767. *Ceroplastes marmoreus* Ckll.

Ceroplastes marmoreus Ckll., Ann. Mag. N. H., (7), xi, p. 158 (1903).

Habitat.—Mexico.

On sage; Catalpa: "A Composite near Parthenium."

768. *Ceroplastes mexicanus* Ckll.

Ceroplastes mexicanus Ckll., Psyche, vii, Suppl., i, p. 20 (1896).

“ “ “ Bull. 4, T. s., Dep. Ag., p. 34 (1896).

“ “ “ Ann. Mag. N. H., (7), xi, p. 156 (1903).

Habitat.—Mexico.

On Catalpa.

769. *Ceroplastes mimosæ* Sign.

Ceroplastes mimosæ Sign., Ann. Soc. Ent. Fr., (5), ii, p. 46 (1872).

Bull. " " " " " p. xlvii (1872).

Habitat.—Egypt.

On *Mimosa nilotica*.

770. *Ceroplastes minutus* Ckll.

Ceroplastes minutus Ckll., Ann. Mag. N. H., (7), i, p. 434 (1898).

Habitat.—Mexico.

On "Escobillo."

771. *Ceroplastes myricæ* (Linn.).

Coccus myricæ Linn., Syst. Nat., Ed. xii, i, p. 741 (1766).

“ “ Mod., Act. Goth., p. 31 (1778).

“ Gmel., Syst. Nat., Ed. xiii, p. 2217 (1789).

“ Oliv., *Ency. Meth.*, vi, p. 96 (1791).

“ Fab., Ent. Syst., iv, p. 226 (1794).

“ Turton, Syst. Nat., p. 713 (1801).

“ Fab., Syst. Rhyng., p. 309 (1803).

Columnea " Targ., Catalogue, p. 35 (1869).

Ceroplastes" Sign., Ann. Soc. Ent. Fr., (5), ii, p. 39 (1872).

“ “ Green, *Ind. Mus. Notes*, v, No. 1, p. 8 (1900).

Habitat.—Cape of Good Hope; India; Europe.

On *Myrica quercifolia*; *Cycas revoluta*; tea.

772. *Ceroplastes nerii* Newst.

Ceroplastes nerii Newst., Tr. Ent. Soc. Lond., p. 101 (1897).

Habitat.—Algeria.

On Nerium oleander.

773. *Ceroplastes novaesi* Hemp.

Ceroplastes novaesi Hemp., Rev. Mus. Paul., iv, pp. 457, 459 (1900).

" " " Ann. Mag. N. H., (7), vii, p. 559 (1901).

Habitat.—Brazil.

On *Abutilon*; *Baccharis dracunculifolia*; *Vernonia riedelii*.

***Ceroplastes novaesi mendozæ* Ckll.**

Ceroplastes novaesi mendozæ Ckll., Can. Ent., xxxiv, p. 92 (1902).

Habitat.—Argentine Republic.

774. *Ceroplastes personatus* Newst.

Ceroplastes personatus Newst., Ent. Mon. Mag., xxxiv, p. 94 (1898).

Habitat.—W. Africa.

775. *Ceroplastes plumbaginis* Ckll.

Ceroplastes plumbaginis Ckll., The Entom., xxvi, p. 82 (1893).

" " " Bull. Bot. Dep. Jam., p. 6 (1895).

Habitat.—Antigua.

On *Plumbago capensis*.

776. *Ceroplastes psidii* (Chav.).

Coccus psidii Chav., Ann. Soc. Ent. Fr., (2), vi, p. 139 (1848).

" " Targ., Atti dei Georgofili, n. s., xiii, p. 33 (1866).

" " " Studii sul. Cocc., p. 28 (1867).

" " " Catalogue, p. 35 (1869).

" Chavannesii Targ., " p. 35 (1869).

Ceroplastes " Sign., Ann. Soc. Ent. Fr., ii, p. 40 (1872).

Habitat.—Europe; Brazil.

On *Psidium*.

777. *Ceroplastes purpurellus* Ckll.

Ceroplastes purpurellus Ckll., Ann. Mag. N. H., (7), xi, p. 159 (1903).

Habitat.—Mexico.

778. *Ceroplastes purpureus* Hemp.

Ceroplastes purpureus Hemp., Rev. Mus. Paul., iv, p. 465 (1900).

" " " Ann. Mag. N. H., (7), viii, p. 63 (1901).

Habitat.—Brazil.

On *Miconia*.

779. *Ceroplastes rarus* Hemp.

Ceroplastes rarus Hemp., Rev. Mus. Paul., iv, p. 469 (1900).

" " " Ann. Mag. N. H., (7), viii, p. 65 (1901).

Habitat.—Brazil.

780. *Ceroplastes roseatus* Towns. & Ckll.

Ceroplastes roseatus Towns. & Ckll., Jn. N. Y. Ent. Soc., vi, p. 176 (1898).

" " Ckll., Ann. Mag. N. H., (7), iii, p. 167 (1899).

" " Dolby-Tyler, Tr. Ent. Soc. Lond., p. 277 (1899).

Habitat.—Mexico; Panama.

On "Cojon de venado."

Ceroplastes roseatus var. B. Towns. & Ckll.

Ceroplastes roseatus var. B., Towns. & Ckll., Ann. Mag. N. H., (7), xi, p. 157 (1903).

Habitat.—Mexico.

781. Ceroplastes rotundus Hemp.

Ceroplastes rotundus Hemp., Rev. Mus. Paul., iv, p. 473 (1900).

“ “ “ Ann. Mag. N. H., (7), viii, p. 68 (1901).

Habitat.—Brazil.

On *Maytenus*.

782. Ceroplastes rubens Mask.

Ceroplastes rubens Mask., N. Z. Trans., xxv, p. 214 (1892).

“ “ Craw, 5th Bien. Rep. Cal. Bd. Hort., p. 44 (1896).

“ “ Frog., Rep. Dep. Ag. N. S. W., No. 175, p. 3 (1897).

“ “ Mask., N. Z. Trans., xxix, p. 309 (1897).

“ “ Gurney, Rep. 7th Meet. Austr. Assoc. Adv. Sci., p. 273 (1898).

“ “ Green, Ind. Mus. Notes, v, No. 1, p. 9 (1900).

Habitat.—Australia; Hawaiian Islands; Japan.

On *Mangifera indica*; *Ficus macrophylla*; *Eugenia Smithii*; *Magnolia purpurea*; *Ilex latifolia*; ferns; orange; pear, etc. List in Rep. Dep. Ag. N. S. W., No. 175, p. 4 (1897).

Ceroplastes rubens minor Mask.

Ceroplastes rubens var. *minor* Mask., N. Z. Trans., xxix, p. 309 (1897).

Habitat.—China.

On *Pinus sinensis*; *P. thunbergii*.

783. Ceroplastes rusci (Linn.).

Coccus rusci Linn., Syst. Nat., Ed. x, i, p. 456 (1758).

“ “ “ “ “ “ xii, i, p. 741 (1766).

“ *caricæ* Bern., Mem. Acad. Marseille, p. 89 (1773).

“ *rusci* Fab., Syst. Ent., p. 743 (1775).

“ “ Mod., Act. Goth., i, p. 31 (1778).

“ “ Fab., Spec. Ins., ii, p. 394 (1781).

“ “ “ Mant. Ins., ii, p. 319 (1787).

“ “ Gmel., Syst. Nat., Ed. xiii, p. 2217 (1789).

“ *caricæ* Oliv., Ency. Meth., vi, p. 93 (1791).

“ *rusci* “ “ “ “ p. 95 (1791).

“ *artemisiæ* Rossi, Mant. Ins., ii, pp. 56, 514 (1794).

“ *caricæ* Fab., Ent. Syst., iv, p. 225 (1794).

“ *rusci* “ “ “ “ p. 226 (1794).

“ “ Turton, Syst. Nat., p. 713 (1801).

“ *caricæ* “ “ “ “ p. 713 (1801).

“ “ Fab., Syst. Rhyng., p. 308 (1803).

“ *rusci* “ “ “ “ p. 309 (1803).

“ *caricæ* Fonsc., Ann. Soc. Ent. Fr., iii, p. 205 (1834).

- Calypticus radiatus* Costa, Faun. Reg. Nap., Cocc., p. 12 (1835).
 " *testudineus* " " " " " p. 12 (1835).
 " *hydatis* " " " " " p. 14 (1835).
Columnnea testudinata Targ., Atti dei Georgofili, n. s., xiii, p. 31 (1866).
 " " " Studii sul. Cocc., p. 8 (1867).
Coccus caricae " " " " pp. 4, 8, 12 (1867).
 " *hydatis* " " " " p. 12 (1867).
Columnnea testudiniformis " " " " pp. 8, 11, 12 (1867).
Chermes caricae Bdv., Ent. Hort., p. 320 (1867).
Columnnea testudinata Targ., Catalogue, p. 35 (1869).
Ceroplastes rusci Sign., Ann. Soc. Ent. Fr., (5), ii, p. 35 (1872).
Lecanium artemisiae Sign., " " " " " ii, p. 37 (1872).
Coccus rusci Sign., Bull. " " " " " vi, p. lxxvi (1876).
Ceroplastes rusci Colvée, Estud. sob. Ins., Cocc., p. 9 (1881).
 " " Bull. Soc. Ent. Fr., (6), i, p. xii (1881).
 " " Blanch., Les Coccides utiles, p. 23 (1883).
 " " Targ., Annali di Agr., pp. 400, 409 (1884).
 " " McIntire, Jn. Quekett Micr. Club, p. 23 (1889).
Lecanium artemisiae Targ., Cocc. deg. Agr. Ital., p. 13, note (1891).
Columnnea testudiniformis Targ., Cocc. deg. Agr. Ital., pp. 13, 28 (1891).
 " *rusci* Berl., Riv. Pat. Veg., i, p. 62 (1892).
Ceroplastes " Visart, " " " " iii, p. 44 (1894).
 " " Saccardo, Riv. Pat. Veg., iv, p. 47 (1895).
 " " Berl. e Leon., Cherm. Ital., Fasc. ii, No. 50 (1897).
 " " Newst., Tr. Ent. Soc. Lond., p. 101 (1897).
 " " Leon., Lab. di Ent. Agr. Portici, p. 3 (1899).
 " " Trabut, Bul. Agr. Algérie et Tunisie, No. 7, pp. 161-167 (1902).
 Habitat.—Europe: British Guiana; Algeria; Australia; Japan.
 On fig; holly; myrtle; wormwood.

784. *Ceroplastes scutigera* Ckll.

- Ceroplastes scutigera* Ckll., Can. Ent., xxxiv, p. 92 (1902).
 Habitat.—Argentine Republic.

785. *Ceroplastes simplex* Hemp.

- Ceroplastes simplex* Hemp., Rev. Mus. Paul., iv, p. 475 (1900).
 " " " Ann. Mag. N. H., (7), viii, p. 68 (1901).
 Habitat.—Brazil.
 On Myrtaceæ.

786. *Ceroplastes sinensis* Del Guercio.

- Ceroplastes sinensis* Del Guer., Science, n. s., xiii, p. 469 (1901).
 Habitat.—Italy.
 On lemon trees.

787. *Ceroplastes speciosus* Hemp.

Ceroplastes speciosus Hemp., Rev. Mus. Paul., iv, p. 464 (1900).

Habitat.—Brazil.

On Myrtaceæ.

788. *Ceroplastes townsendi* Ckll.

Ceroplastes townsendi Ckll., Biol. Centr. Am., ii, pt. 2, p. 18 (1899).

Habitat.—Mexico.

***Ceroplastes townsendi percrassus* Ckll.**

Ceroplastes townsendi var. *percrassus* Ckll., Ann. Mag. N. H., (7), xi, p. 159 (1903).

Habitat.—Mexico.

On Oleander; *Ficus*.

789. *Ceroplastes utilis* Ckll.

Ceroplastes utilis Riley & How., Ins. Life, v, p. 139 (1892) no desc.

“ “ Ckll., The Entom., xxvi, p. 83 (1893).

“ “ Bull. Bot. Dep. Jam., p. 7 (1895).

Habitat.—Grand Turk Island, Bahamas.

790. *Ceroplastes variegatus* Hemp.

Ceroplastes variegatus Hemp., Rev. Mus. Paul., iv, p. 462 (1900).

“ “ “ Ann. Mag. N. H., (7), vii, p. 560 (1901).

Habitat.—Brazil.

On Myrtaceæ.

791. *Ceroplastes vinsonii* Sign.

Ceroplastes vinsonii Sign., Ann. Soc. Ent. Fr., (5), ii, p. 38 (1872).

“ “ de Charm., Pr. Soc. Amic. Scien., p. 38 (1899).

Habitat.—Mauritius; Reunion Island.

On *Eriobotrya japonica*; guava.

Genus **CHELONICOCCLUS** A. Costa. Type, luteus.

Chelonicoccus A. Costa, Atti del. R. Acad. Sci., Napoli, iii, p. 10 (1866).

“ Doubtful genus, only known from external characters; perhaps a synonym of *Ceroplastes*” (T. D. A. Cockerell).

792. *Chelonicoccus luteus* A. Costa.

Chelonicoccus luteus A. Costa, Atti del. R. Acad. Sci., Napoli, iii, p. 12 (1866).

Habitat.—Italy.

Genus **VINSONIA** Sign. Type, *stellifera*.

Vinsonia Sign., Ann. Soc. Ent. Fr., (5), ii, p. 33 (1872); Ckll., Can. Ent., xxxi, p. 332 (1899).

793. *Vinsonia stellifera* (Westw.).

- Coccus stellifera* Westw., Pr. Ent. Soc. Lond., pp. 3, 111 (1871).
Vinsonia pulchella Sign., Ann. Soc. Ent. Fr., (5), ii, p. 34 (1872).
Coccus stellifer " " " " " " vi, p. 608 (1876).
Vinsonia stellifera Dougl., Ent. Mon. Mag., xxv, p. 152 (1888).
 " " Ckll., Gard. Chron., (3), xiii, p. 548 (1893).
 " " Jn. Trin. Nat. Club, i, p. 307 (1894).
 " " Bull. Bot. Dep. Jam., p. 100 (1895).
 " " Jn. Trin. Nat. Club, ii, p. 307 (1896).
 " " Check List, p. 330 (1896).
 " " Green, Ind. Mus. Notes, iv, p. 8 (1896).
 " " de Charm., Pr. Soc. Amic. Scien., p. 38 (1899).
 " " Hemp., Rev. Mus. Paul., iv, p. 477 (1900).
 " " Lefroy, Scale Ins. Less. Antil., p. 41 (1901).

Habitat.—Trinidad; Jamaica; Antigua; Barbados; Demerara; Grenada; Brazil; Central America; California; Ceylon.

On orchids; ferns; guava; mango; nutmeg; coccanut-palm, etc.

Genus CTENOCHITON Mask. Type, viridis.

Ctenochiton Mask., N. Z. Trans., xi, p. 208 (1878); Ins. Nox. Agr. N. Z., p. 65 (1887); Ckll., Can. Ent., xxxi, p. 332 (1899).

794. *Ctenochiton araucariæ* Green.

Ctenochiton(?) *araucariæ* Green, Ann. Mag. N. H., (7), vi, p. 449 (1900).

Habitat.—Australia.

On *Araucaria*.

795. *Ctenochiton aztecus* Towns. & Ckll.

Ctenochiton aztecus Towns. & Ckll., Jn. N. Y. Ent. Soc., vi, p. 176 (1898).

Habitat.—Mexico.

On "Cafetilla cimarron."

796. *Ctenochiton cellulosus* Ckll.

Ctenochiton cellulosus Ckll., Victorian Naturalist, xvi, p. 88 (1899).

Habitat.—Australia.

797. *Ctenochiton dacrydii* Mask.

Ctenochiton dacrydii Mask., N. Z. Trans., xxiv, p. 18 (1891).

Habitat.—New Zealand.

On *Dacrydium cupressinum*.

798. *Ctenochiton depressus* Mask.

Ctenochiton depressus Mask., N. Z. Trans., xvi, p. 132 (1883).

" " " Ins. Nox. Agr. N. Z., p. 66 (1887).

" " " N. Z. Trans., xxiv, p. 19 (1891).

Habitat.—New Zealand.

On *Plagianthus*; *Cyathea*, etc.

Ctenochiton depressus minor Mask.

Ctenochiton depressus, small form, Mask., N. Z. Trans., xxiv, p. 19 (1891).
 " " forma minor, " " " xxvii, p. 12 (1894).

Habitat.—New Zealand.

On Coprosma.

799. Ctenochiton elæocarpī Mask.

Ctenochiton elæocarpī Mask., N. Z. Trans., xvii, p. 26 (1884).
 " " " " " xix, pp. 41, 42 (1886).
 " " " Ins. Nox. Agr. N. Z., p. 67 (1887).

Habitat.—New Zealand.

On Elæocarpus dentatus.

800. Ctenochiton elongatus Mask.

Ctenochiton elongatus Mask., N. Z. Trans., xi, p. 212 (1878).
 " " " Ins. Nox. Agr. N. Z., p. 68 (1887).
 " " Ckll., Gard. Chron., (3), xiii, p. 548 (1893).

Habitat.—New Zealand.

On Geniostoma ligustrifolium; Dendrobium; Earina.

801. Ctenochiton eucalypti Mask.

Ctenochiton eucalypti Mask., N. Z. Trans., xxvii, p. 52 (1894).
 Habitat.—Australia.
 On Eucalyptus siderophloia.

802. Ctenochiton flavus Mask.

Ctenochiton flavus Mask., N. Z. Trans., xvi, p. 130 (1883).
 " " " " " xvii, p. 26 (1884).
 " " " Ins. Nox. Agr. N. Z., p. 68 (1887).

Habitat.—Brazil.

On Brachyglottis repanda; Panax arboreum; Leptospermum scoparium;
 Elæocarpus dentatus.

803. Ctenochiton fuscus Mask.

Ctenochiton fuscus Mask., N. Z. Trans., xvi, p. 131 (1883).
 " " " Ins. Nox. Agr. N. Z., p. 70 (1887).

Habitat.—New Zealand.

On Brachyglottis repanda; Panax arboreum.

804. Ctenochiton hymenanthæ Mask.

Ctenochiton hymenanthæ Mask., N. Z. Trans., xvii, p. 25 (1885).
 " " " Ins. Nox. Agr. N. Z., p. 71 (1887).

Habitat.—New Zealand.

On Hymenanchera crassifolia.

805. Ctenochiton perforatus Mask.

Ctenochiton perforatus Mask., N. Z. Trans., xi, p. 280 (1878).

" " " " " xvi, p. 130 (1883).

" " " " " xix, p. 41 (1886).

" " " Ins. Nox. Agr. N. Z., p. 72 (1887).

" " Ckll., Can. Ent., xxvi, p. 34 (1894).

Habitat.—New Zealand.

On *Pittosporum eugenioides*; *P. tenuifolium*; *Panax arboreum*; *Coprosma lucida*; *Rubus*.

806. Ctenochiton piperis Mask.

Ctenochiton piperis Mask., N. Z. Trans., xiv, p. 218 (1881).

" " " " " xvii, p. 25 (1884).

" " " Ins. Nox. Agr. N. Z., p. 73 (1887).

Habitat.—New Zealand.

On *Piper excelsum*.

807. Ctenochiton rhizophoræ Mask.

Ctenochiton rhizophoræ Mask., N. Z. Trans., xxvii, pp. 51, 54, 55 (1894).

Habitat.—Australia.

On *Rhizophora mangle* (mangrove).

808. Ctenochiton viridis Mask.

Ctenochiton viridis Mask., N. Z. Trans., xi, p. 211 (1878).

" " " " " xvii, p. 24 (1884).

" " " Ins. Nox. Agr. N. Z., p. 74 (1887).

" " " Ent. Mon. Mag., xxvi, p. 278 (1890).

Habitat.—New Zealand.

On *Panax arboreum*; *Coprosma lucida*; *Hedycarya dentata*; *Rubus australis*; *Atherosperma Novæ-zelandiæ*.

Genus **CARDIOCOCCUS** Ckll. Type, *umbonatus*.

Cardiococcus Ckll., Ann. Mag. N. H., (7), xi, p. 155 (1903).

809. Cardiococcus foraminifer (Mask.).

Inglisia foraminifer Mask., N. Z. Trans., xxv, p. 213 (1892).

Cardiococcus " Ckll., Ann. Mag. N. H., (7), xi, p. 156 (1903).

Habitat.—Australia.

On *Santalum acuminatum*.

Cardiococcus foraminifer loranathi (Full.).

Inglisia foraminifer var. *loranathi* Full., Notes on Cocc. W. Austr., p. 6 (1897).

" " " " " Tr. Ent. Soc. Lond., p. 460 (1899).

Habitat.—W. Australia.

On *Loranthus quandang* (mistletoe) on *Santalum*.

810. *Cardiococcus fossilis* (Mask.).

Inglisia fossilis Mask., N. Z. Trans., xxix, p. 308 (1897).

Cardiococcus fossilis Ckll., Ann. Mag. N. H., (7), xi, p. 156 (1903).

Habitat.—W. Australia.

On Acacia; Templetonia.

811. *Cardiococcus umbonatus* Ckll.

Cardiococcus umbonatus Ckll., Ann. Mag. N. H., (7), xi, p. 155 (1903).

Habitat.—Mexico.

On wild guava.

Genus **INGLISIA** Mask. Type, patella.

Inglisia Mask., N. Z. Trans., xi, p. 213 (1878); Ins. Nox. Agr. N. Z., p. 75 (1887):

Ckll., Can. Ent., xxxi, p. 332 (1899).

812. *Inglisia bivalvata* Green.

Inglisia bivalvata Green, Ind. Mus. Notes, v, p. 93 (1903).

Habitat.—S. India.

On *Thespesia populnea*.

813. *Inglisia fagi* Mask.

Inglisia fagi Mask., N. Z. Trans., xxiii, p. 13 (1890).

Habitat.—New Zealand.

On *Fagus*.

814. *Inglisia inconspicua* Mask.

Inglisia inconspicua Mask., N. Z. Trans., xxiv, p. 19 (1891).

Habitat.—New Zealand.

On *Corokia Cotoneaster*.

815. *Inglisia leptospermi* Mask.

Inglisia leptospermi Mask., N. Z. Trans., xiv, p. 220 (1881).

“ “ “ “ “ xvii, p. 27 (1884).

“ “ “ Ins. Nox. Agr. N. Z., p. 75 (1887).

Habitat.—New Zealand.

On *Leptospermum scoparium*.

816. *Inglisia malvacearum* Ckll.

Inglisia malvacearum Ckll., Ann. Mag. N. H., (7), i, p. 432 (1898).

Habitat.—Mexico.

On *Malva*; *Hibiscus*; cotton.

817. *Inglisia ornata* Mask.

Inglisia ornata Mask., N. Z. Trans., xvii, p. 27 (1884).

“ “ “ Ins. Nox. Agr. N. Z., p. 76 (1887).

Habitat.—New Zealand.

On *Elæocarpus dentatus*; *Leptospermum scoparium*.

818. *Inglisia patella* Mask.

Inglisia patella Mask., N. Z. Trans., xi, p. 213 (1878).

“ “ “ “ “ xiv, p. 219 (1881).

“ “ “ Ins. Nox. Agr. N. Z., p. 78 (1887).

Habitat.—New Zealand.

On *Coprosma lucida*; *Drimys colorata*; *Atherosperma*.

819. *Inglisia vitrea* Ckll.

Inglisia vitrea Ckll., Jn. Trin. Nat. Club, i, p. 308 (1894).

" " " Bull. Bot. Dep. Jam., p. 100 (1895).

Habitat.—Trinidad.

On Acacia.

Genus **PARAFIRMARIA** Ckll. Type, bipartita.

|| Fairmairia Sign., Ann. Soc. Ent. Fr., (5), iv, p. 98 (1874).

Parafairmairia Ckll., Can. Ent., xxxi, p. 332 (1899).

820. *Parafairmairia bipartita* (Sign.).

Fairmairia bipartita Sign., Bull. Soc. Ent. Fr., (5), ii, p. xxxvi (1872) no desc.

“ “ “ Ann. “ “ “ “ iv, p. 99 (1874).

Habitat.—France.

On *Agropyrum campestre*; *Mesembrianthemum*.

Genus **LAGOSINIA** Ckl. Type, strachani.

Lagosinia Ckll., Can. Ent., xxxi, p. 332 (1899).

821. *Lagosinia strachani* (Ckll.).

Lecanium strachani Ckll., The Entom., xxxi, p. 259 (1898).

Lagosinia " " Can. Ent., xxxi, p. 332 (1899).

Habitat.—W. Africa.

On *Anona squamosa*.

Genus **ALICHTENSIA** Ckll. Type, attenuata.

Alichtensia Ckll., Ann. Mag. N. H., (7), ix, p. 451 (1902).

822. *Alichtensia attenuata* (Hemp.).

Lichtensia(?) attenuata Hemp., Rev. Mus. Paul., iv, p. 494 (1900).

“ “ Ckll., Ann. Mag. N. H., (7), viii, p. 105 (1901).

Alichtensia " " " " " " ix, p. 451 (1902).

Habitat.—Brazil.

On *Baccharis genistelloides*.

Genus **EDWALLIA** Hemp. Type, *rugosa*.

Edwallia Hemp., Can. Ent., xxxi, p. 131 (1899; Rev. Mus. Paul., iv, p. 478 (1900).

823. Edwallia rugosa Hemp.

Edwallia rugosa Hemp., Can. Ent., xxxi, p. 131 (1899).

" " " Rev. Mus. Paul., iv, p. 478 (1900).

Habitat.—Brazil.

On Eugenia jaboticaba.

Genus **CEROPLASTODES** Ckll. Type, dugesii.

Ceroplastodes Ckll., The Entom., xxvi, p. 350 (1893); Can. Ent., xxxi, p. 333 (1899).

824. Ceroplastodes acaciæ Ckll.

Ceroplastodes acaciæ Ckll., Psyche, vii, Suppl., i, p. 2 (1895).

Habitat.—Arizona: New Mexico.

On Acacia constricta.

825. Ceroplastodes cajani (Mask.).

Eriochiton cajani Mask., Ind. Mus. Notes, ii, p. 61 (1891).

" " " N. Z. Trans., xxiv, p. 24 (1891).

" " " " " xxix, p. 314 (1897).

Ceroplastodes cajani Ckll., Nature, lxi, p. 368 (1900).

Habitat.—India; China.

On Cajanus indicus (pigeon-pea); Mallotus cochinchinensis.

826. Ceroplastodes daleæ Ckll.

Ceroplastodes daleæ Ckll., Ann. Mag. N. H., (6), xiv, p. 13 (1894).

Habitat.—New Mexico.

On Dalea formosa.

827. Ceroplastodes dugesii ("Licht.," Sign.).

Lecanopsis dugesii "Licht.," Sign., Bull. Soc. Ent. Fr., (6), vi, p. xxxix (1886).

Fairmairia (Ceroplastodes) nivea Ckll., The Entom., xxvi, p. 350 (1893).

Inglisia nivea Ckll., Ann. Mag. N. H., (6), xii, p. 160 (1893).

Ceroplastodes nivea Ckll., Ann. Mag. N. H., (6), xv, p. 209 (1895).

Lecanopsis dugesi " Biol. Centr. Amer., ii, pt. 2, p. 15 (1899).

Ceroplastodes niveus " " " " " " " p. 15 (1899).

" dugesi " The Entom., xxxv, p. 194 (1902).

Habitat.—Mexico.

On Mimosa.

828. Ceroplastodes melaleucæ (Green).

Eriochiton(?) melaleucæ Green, Victorian Naturalist, xvii, p. 12 (1900).

Ceroplastodes " Ckll., in litt. (1902).

Habitat.—Australia.

On Melaleuca.

Genus **PLATINGLISIA** Ckll. Type, noacki.

Platinglisia Ckll., The Entom., xxxii, p. 12 (1899); Can. Ent., xxxi, p. 333 (1899).

829. Platinglisia noacki Ckll.

Platinglisia noacki Ckll., The Entom., xxxii, p. 12 (1899).

" " Hemp., Rev. Mus. Paul., iv, p. 477 (1900).

Habitat.—Brazil.

On "A myrtaceous shrub"; Laurus.

Genus **SCHIZOCHLAMIDIA** Ckll. Type, mexicana.

Schizochlamidia Ckll., Biol. Centr. Amer., ii, pt. 2, p. 15 (1899); Can. Ent., xxxi, p. 333 (1899).

830. Schizochlamidia mexicana Ckll. & Parr.

Schizochlamidia mexicana Ckll. & Parr., Biol. Centr. Amer., ii, pt. 2, p. 15 (1899).

Habitat.—Mexico.

On Mimosa.

Genus **PSEUDOKERMES** Ckll. Type, nitens.

Pseudokermes Ckll., Can. Ent., xxvii, p. 203 (1895); xxxi, p. 333 (1899).

831. Pseudokermes armatus (Ckll.).

Lecanium (Pseudokermes) armatus Ckll., Ann. Mag. N. H., (7), i, p. 436 (1898).

Pseudokermes armatus Ckll., Pr. Ac. N. Sci. Ph., p. 270 (1899).

Habitat.—Mexico.

On "Palo de gusano."

832. Pseudokermes nitens (Hemp.).

Lecanium (Pseudokermes) nitens Ckll., Can. Ent., xxvii, p. 203 (1895).

Pseudokermes nitens Hemp., Rev. Mus. Paul., iv, p. 448 (1900).

" " " Ann. Mag. N. H., (7), vii, p. 219 (1901).

Habitat.—Brazil.

On Myrtus Tweedii; Psidium, etc.

Genus **CRYPTINGLISIA** Ckll. Type, lounsburyi.

Cryptinglisia lounsburyi Ckll., The Entom., xxxiii, p. 173 (1900).

833. Cryptinglisia lounsburyi Ckll.

Cryptinglisia lounsburyi Ckll., The Entom., xxxiii, p. 173 (1900).

" " " Lounsb., Rep. Ent. Cape Good Hope, p. 54 (1900).

Habitat.—Cape Colony, S. Africa.

On roots of Vitis vinifera.

Genus **EUCALYMNATUS** Ckll. Type, tessellatus.

s. g. Eucalymnatus Ckll., Can. Ent., xxxiii, p. 57 (1901); g. Ann. Mag. N. H., (7), ix, p. 453 (1902).

834. *Eucalymnatus brunfelsiae* (Hemp.).

Lecanium brunfelsiae Hemp., Rev. Mus. Paul., iv, p. 418 (1900).

" " " Ann. Mag. N. H., (7), vii, p. 206 (1901).

Eucalymnatus brunfelsiae Ckll., " " " " ix, p. 453 (1902).

Habitat.—Brazil.

On *Brunfelsia*; *Laurus*.

The specific name *brunfelsiae* is undoubtedly a misprint for *brunfelsiae* as Mr. Hempel sent specimens under the latter name to Prof. Cockerell.

835. *Eucalymnatus gracilis* (Hemp.).

Lecanium gracile Hemp., Rev. Mus. Paul., iv, p. 419 (1900).

" " " Ann. Mag. N. H., (7), vii, p. 208 (1901).

Eucalymnatus gracilis Ckll., " " " " ix, p. 453 (1902).

Habitat.—Brazil.

On *Sapindaceae*.

836. *Eucalymnatus perforatus* (Newst.).

Lecanium perforatum Newst., Ent. Mon. Mag., xxx, p. 233 (1894).

" " Ckll., Can. Ent., xxvii, p. 257 (1895).

" " Craw, 5th Bien. Rep. Cal. Bd. Hort., p. 46 (1896).

" " Newst., Ent. Mon. Mag., xxxiii, p. 75 (1897).

" *tessellatum* var. *perforatum* Ckll., Psyche, viii, p. 90 (1897).

" " " " Quaint., " " p. 91 (1897).

" " " " Ckll. & Parr., The Industrialist, pp.

229, 276 (1899).

" *perforatum* Newell, Bull. 43, Ia. Exp. Sta., p. 170 (1899).

" " Newst., Journ. Roy. Hor. Soc., xxiii, p. 24 (1900).

" " King, Ent. News, xii, p. 312 (1901).

" " Kirkaldy, Fauna Haw., iii, pt. 2, p. 106 (1902).

" " Thro, Bull. 209, Corn. Univ. Exp. Sta., p. 212 (1903).

Eucalymnatus " Ckll., in litt. (1902).

Habitat.—England; Hawaii; Australia; Fla.; Ia.: Col.: Cal.

On *Caryota cumingii*; *Eugenia jambos*; *Howea Belmoreana*; *Trachycarpus excelsus*; various hothouse plants.

837. *Eucalymnatus tessellatus* (Sign.).

Lecanium tessellatum Sign., Ann. Soc. Ent. Fr., (5), iii, p. 401 (1873).

" " Dougl., Ent. Mon. Mag., xxiv, p. 25 (1887).

" " Mask., N. Z. Trans., xxv, p. 219 (1892).

" " Ckll., Tr. Am. Ent. Soc., xx, p. 51 (1893).

" " Mask., N. Z. Trans., xxvii, p. 59 (1894).

" " Ckll., Bull. Bot. Dep. Jam., p. 19 (1894).

" " Tyr., Rep. Cal. Exp. Sta., 1894-95, pp. 256, 264 (1896).

" " Green, Ind. Mus. Notes, iv, p. 9 (1896).

" " Davis, Spec. Bull. 2, Mich. Exp. Sta., p. 33 (1896).

" " Frog., Rep. Dep. Ag. N. S. W., No. 175, p. 6 (1897).

" " de Charm., Pr. Soc. Amic. Scien., p. 40 (1899).

Lecanium tessellatum Ckll. & Parr., *The Industrialist*, p. 229 (1899).

" " King, *Ent. News*, xii, p. 312 (1901).

Coccus " Kirkaldy, *Faun. Haw.*, iii, pt. 2, p. 106 (1902).

Eucalymnatus " Ckll., *Ann. Mag. N. H.*, (7), ix, p. 453 (1902).

Habitat.—France; England; Australia; Mauritius; Hawaiian Islands
Ceylon; Jamaica.

On *Laurus nobilis*; *Sapindus saponaria*; *lignum-vitæ*; palms; ferns, etc.

Eucalymnatus tessellatus swainsonæ (Ckll.).

Lecanium tessellatum var. *swainsonæ* Ckll., *Bull. Bot. Dep. Jam.*, iv, p. 109 (1897).

" " " " " *Psyche*, viii, p. 90 (1897).

" " " " " & Parr., *The Industrialist*, p. 229
(1899).

Habitat.—Jamaica.

On *lignum-vitæ*.

Genus **STICTOLECANIUM** Ckll. Type, *ornatum*.

Stictolecanium Ckll., *Ann. Mag. N. H.*, (7), ix, p. 452 (1902).

838. *Stictolecanium ornatum* (Hemp.).

Lecanium ornatum Hemp., *Rev. Mus. Paul.*, iv, p. 421 (1900).

" " " *Ann. Mag. N. H.*, (7), vii, p. 209 (1901).

Stictolecanium ornatum Ckll., " " " " ix, p. 452 (1902).

Habitat.—Brazil.

On *Eugenia jaboticaba*.

Genus **COCCUS** Linn. Type, *hesperidum*.

Coccus Linn., *Syst. Nat.*, Ed. x, i, p. 455 (1758); *Syst. Nat.*, Ed. xii, i, p. 739

(1766); *Fab.*, *Syst. Ent.*, p. 742 (1775); *Gen. Ins.*, p. 186 (1776); *Gmel.*,

Syst. Nat., Ed. xiii, p. 2215 (1789); *Fab.*, *Ent. Syst.*, iv, p. 224 (1794);

Syst. Rhynch., p. 306 (1803); Ckll., *Pr. Ac. N. Sci. Ph.*, p. 260 (1899);

Fern. M. E., *Can. Ent.*, xxxiv, p. 232 (1902).

Calymmata Costa, *Prospetto di una Div. Metod. gen. Coccus*, p. 5 (1828).

Calypticus Costa, *Faun. Reg. Nap.*, *Cocciniglie*, p. 8 (1835).

Lecanium Burm., *Handb. Ent.*, ii, p. 69 (1835); *Walk.*, *Cat. Br. Mus.*, *Hom.*,

p. 1068 (1852); *Sign.*, *Ann. Soc. Ent. Fr.*, (5), iii, p. 395 (1873); *Comst.*,

Rep. U. S. Dep. Ag., 1880, p. 334 (1881); *Mask.*, *Ins. Nox. Agr. N. Z.*, p.

79 (1887); *Targ.*, *Coccin. deg. Agrumi in Ital.*, p. 9 (1891).

839. *Coccus acuminatus* (Sign.).

Lecanium acuminatum Sign., *Ann. Soc. Ent. Fr.*, (5), iii, p. 397 (1873).

" " *Atk.*, *Ind. Mus. Notes*, i, p. 8 (1889).

" " *Mask.*, *N. Z. Trans.*, xxv, p. 219 (1892).

" " *Cotes*, *Ind. Mus. Notes*, ii, p. 168 (1893).

" " Ckll., *Gard. Chron.*, (3), xiii, p. 548 (1893).

Coccus " Kirkaldy, *Fauna Haw.*, iii, pt. 2, p. 105 (1902).

Habitat.—Hawaiian Islands; Ceylon; France.

On guava; mango; hothouse orchids.

840. *Coccus acutissimus* (Green).

Lecanium acutissimum Green, Ind. Mus. Notes, iv, p. 10 (1896).

Habitat.—Ceylon.

On leaves of cocoanut and other palms.

841. *Coccus angustatus* (Sign.).

Lecanium angustatum Sign., Ann. Soc. Ent. Fr., (5), iii, p. 398 (1873).

“ “ Dougl., Ent. Mon. Mag., xxiv, p. 25 (1887).

Habitat.—England.

On *Anthurium Scherzerianum* from Costa Rica; *Cyperus papyrus*.

842. *Coccus antidesmæ* (Green).

Lecanium antidesmæ Green, Ind. Mus. Notes, iv, p. 10 (1896).

Habitat.—Ceylon.

On *Antidesma Bunius*.

843. *Coccus caudatus* (Green).

Lecanium caudatum Green, Ind. Mus. Notes, iv, p. 10 (1896).

Habitat.—Ceylon.

On *Passiflora*; coffee.

844. *Coccus*(?) *elongatus* (Sign.).

Lecanium elongatum Sign., Ann. Soc. Ent. Fr., (5), iii, p. 404 (1873).

Habitat.—France.

On “cherry-laurel.”

845. *Coccus ficus* (Mask.).

Lecanium ficus Mask., Ent. Mon. Mag., xxxiii, p. 243 (1897).

“ “ Ckll. & Parr., The Industrialist, p. 229 (1899).

Habitat.—China.

On fig.

846. *Coccus flaveolus* (Ckll.).

Lecanium flaveolum Ckll., Psyche, viii, pp. 52, 53 (1897).

“ “ Ckll. & Parr., The Industrialist, p. 230 (1899).

Habitat.—New Mexico (in greenhouses); Col.

On *Pilea microphylla*.

847. *Coccus genistæ* (Sign.).

Lecanium genistæ Sign., Ann. Soc. Ent. Fr., (5), iii, p. 405 (1873).

Habitat.—France; Maritime Alps.

On *Genista*; pine.

848. *Coccus hesperidum* (Linn.).

(*The Soft Scale*.)

Coccus hesperidum Linn., Syst. Nat., Ed. x, i, p. 455 (1758).

“ “ “ Faun. Suec., p. 264 (1761).

Chermes “ Geoff., Abr. Ins., i, p. 505 (1762).

- Coccus hesperidum* Linn., Syst. Nat., Ed. xii, i, p. 730 (1766).
 " " Fab., Syst. Ent., p. 742 (1775).
 " " Mod., Act. Goth., i, p. 19 (1778).
 " " Fab., Spec. Ins., ii, p. 393 (1781).
Chermes " Fourc., Ent. Paris., p. 228 (1785).
Coccus " Fab., Mant. Ins., ii, p. 318 (1787).
 " " Gmel., Syst. Nat., Ed. xiii, p. 2215 (1789).
 " " Oliv., Ency. Meth., vi, p. 93 (1791).
 " " Fab., Ent. Syst., iv, p. 224 (1794).
 " " Schr., Faun. Boica, p. 143 (1801).
 " " Fab., Syst. Rhyng., p. 306 (1803).
 " " Panz., Syst. Nom. Schäf. Abbild. Regensb. Ins., p. 119 (1804).
 " " Major, Treatise on Ins., p. 240 (1829).
 " " Fonsc., Ann. Soc. Ent. Fr., iii, p. 208 (1834).
Calypticus " Costa, Faun. Reg. Nap., Cocc., p. 8 (1835).
 " lævis " " " " " " p. 11 (1835).
Calymmatum hesperidum Costa, Nuov. Osserv., p. 22 (1835).
Coccus " Lam., Hist. Nat. Anim., iv, p. 115 (1835).
Lecanium " Burm., Handb. Ent., ii, p. 69 (1835).
 " " Blanch., Hist. Nat. Ins., iii, p. 213 (1840).
Coccus " Koll., Inj. Ins., p. 177 (1840).
 " patelliformis Curt., Gard. Chron., p. 517 (1843).
Lecanium hesperidum Först., Ueber Schildlause, p. 562 (1851).
Calypticus " Lubbock, Pr. Roy. Soc. Lond., ix, p. 480 (1858).
Coccus " " Ann. Mag. N. H., (3), iii, p. 306 (1859).
Calypticus " Beck, Tr. Micr. Soc. Lond., n. s., p. 47 (1861).
Chermes " Bdv., Ent. Hort., p. 331 (1867).
Lecanium " Targ., Studii sul. Cocc., pp. 8, 29, 38, 43, 47, 58 (1867).
 " " " Catalogue, p. 37 (1869).
 " " Sign., Ann. Soc. Ent. Fr., (4), ix, p. 101 (1869).
 " " " " " " (5), iii, p. 399 (1873).
Chermes aurantii Alf., Trat. Col. deg. Agr., p. 431 (1875).
Lecanium hesperidum Glover, Rep. U. S. Dep. Ag., p. 44 (1876).
 " " Mark, Anat. Coccidæ, pp. 21, 26, 30, 52 (1876).
 " " Mask., N. Z. Trans., xi, p. 205 (1878).
 " " Putn., Pr. Dav. Ac. N. Sci., p. 319 (1879).
 " " Comst., Rep. U. S. Dep. Ag., 1880, p. 358 (1881).
 " " Osborn, Tr. Ia. Hor. Soc., p. 213 (1882).
 " " Saund., Ins. Inj. to Fruits, p. 404 (1883).
 " " Neal, Bull. 1, Div. Ent. Dep. Ag., p. 31 (1883).
 " " Comst., 2nd Rep. Dep. Ent. Corn. Univ., p. 134 (1883).
 " " Uhler, St. Nat. Hist., ii, p. 215 (1884).
 " " Targ., Annali di Agr., p. 318 (1884).
 " " Hubbard, Ins. Aff. Orange, p. 49 (1885).

- Lecanium hesperidum* Dougl., Ent. Mon. Mag., xxii, p. 159 (1885).
 “ “ “ “ “ “ xxiv, p. 25 (1887).
 “ “ Mask., Ins. Nox. Agr. N. Z., p. 80 (1887).
 “ “ Karsch, Ent. Nach., p. 95 (1887).
 “ “ Comst., Intr. Ent., p. 141 (1888).
 “ “ Riley & How., Ins. Life, ii, p. 370 (1890).
 “ “ Targ., Cocc. deg. Agr. Ital., p. 10 (1891).
 “ “ Mask., N. Z. Trans., xxv, p. 218 (1892).
 “ “ Coq., Bull. 26, Div. Ent. Dep. Ag., p. 26 (1892).
 “ “ Berl., Riv. Pat. Veg., i, p. 61 (1892).
 “ “ Riley & How., Ins. Life, vi, p. 57 (1893).
 “ “ Mask., Ent. Mon. Mag., xxix, p. 103 (1893).
 “ “ Morg., Spec. Bull. La. Exp. Sta., p. 68 (1893).
 “ “ Ckll., Tr. Am. Ent. Soc., xx, p. 49 (1893).
 “ “ “ Gard. Chron., (3), xiii, p. 543 (1893).
 “ “ Craw, 4th Bien. Rep. Cal. Bd. Hort., p. 96 (1894).
 “ “ Ckll., Bull. Bot. Dep. Jam., p. 18 (1894).
 “ “ Lounsb., Rep. Ent. Cape Good Hope, p. 46 (1895).
 “ “ Comst., Man. Ins., p. 170 (1895).
 ? “ *ceratoniae* Genn., Bull. Soc. Ent. Fr., (7), v, p. cclxxvii (1895).
 “ *hesperidum* Tyr., Rep. Cal. Exp. Sta., 1894-5, p. 267 (1896).
 “ “ Lounsb., Rep. Ent. Cape Good Hope, p. 83 (1896).
 “ “ Davis, Spec. Bull. 2, Mich. Exp. Sta., p. 32 (1896).
 ? “ *ceratoniae* Ckll., Am. Nat., xxxi, p. 590 (1897).
 “ *hesperidum* Osborn, Contr. Ia. Ag. Coll., p. 3 (1898).
 “ “ Rolfs & Quaint., Cocc. Amer., Dec. i-ii, No. 3 (1898).
 “ “ Berl. e Leon., Cherm. Ital., iii, No. 64 (1898).
 “ “ Ckll., Bull. 32, Ariz. Exp. Sta., p. 285 (1899).
 “ “ Newell, Bull. 43, Ia. Exp. Sta., p. 170 (1899).
 “ “ Green, Rep. Roy. Bot. Gard. Ceylon, p. 14 (1899).
 “ “ Hemp., Rev. Mus. Paul., iv, p. 436 (1900).
 “ “ Gossard, Bull. 51, Fla. Exp. Sta., p. 113 (1900).
 “ “ Marlatt, Yearbook U. S. Dep. Ag., p. 275 (1900).
 “ “ Lugger, 6th Rep. Minn. Exp. Sta., p. 217 (1900).
 “ “ Newst., Jn. Roy. Hor. Soc., xxiii, p. 24 (1900).
 “ “ Full., 1st Rep. Ent. Natal, p. 103 (1901).
 “ “ Lefroy, Scale Ins. Less. Antil., p. 46 (1901).
 “ “ King, Ent. News, xii, p. 312 (1901).
 “ “ Kuw., Pr. Cal. Ac. Sci., (3), iii, p. 64 (1902).
 “ “ Thro, Bull. 209, Corn. Univ. Exp. Sta., pp. 206, 211 (1903).

Habitat.—Europe; Australia; New Zealand; South Africa; Hawaiian Islands; Japan; Chili; Algeria; West Indies; Mexico; U. S.; Canada.

On oleander; Camellia; orange; lemon: *Clematis flammula*; *Convolvulus tricolor*; *Mimosa*; holly; ivy; laurel; box; myrtle; *Abutilon*; jasmine; *Morus nigra*; *Cycas revoluta*; *Phlox*, and various other trees and plants.

Coccus hesperidum alienus (Dougl.).

Lecanium alienum Dougl., Ent. Mon. Mag., xxiii, p. 77 (1886).

" *hesperidum* var. *alienum* Ckll., Check List, p. 393 (1899).

Habitat.—England.

On *Asplenium bulbiferum*.

Coccus hesperidum lauri (Bdv.).

Chermes lauri Bdv., Ent. Hort., p. 340 (1867).

Lecanium " Sign., Ann. Soc. Ent. Fr., (5), iii, p. 400 (1873).

" " Dougl., Ent. Mon. Mag., xxv, p. 57 (1888).

" " " " " xxvii, p. 244 (1891).

" " Mask., " " " xxix, p. 103 (1893).

" " Dougl., " " " xxx, p. 29 (1894).

" *hesperidum* var. *lauri* Ckll., Check List, p. 331 (1896).

Habitat.—Europe; Australia; Mass.

On Laurel; ivy; holly; Citrus.

Coccus hesperidum pacificus (Kuwana.)

Lecanium (*Calymnatus*) *hesperidum pacificum* Kuw., Jn. N. Y. Ent. Soc., x, p. 30 (1902).

Habitat.—Galapagos Islands.

On *Achrostichum caudatum*; *Hibiscus tiliaceus*; *Adiantum*; *Polypodium*; *Psychotria*; *Alsophila* and several other plants.

849. Coccus hoferi (King).

Lecanium hoferi King, Mitth. Schw. Ent. Ges., (10), x, pp. 478, 483 (1903).

Habitat.—Switzerland.

On pear; apple; plum.

850. Coccus longulus (Dougl.).

Lecanium longulum Dougl., Ent. Mon. Mag., xxiv, p. 97 (1887).

" *chirimoliæ* Mask., N. Z. Trans., xxii, p. 137 (1889).

" " " " " xxiii, p. 16 (1890).

" *longulum* " " " " p. 16 (1890).

" " " " " xxv, p. 221 (1892).

" " Ckll., Tr. Am. Ent. Soc., xx, p. 50 (1893).

" " " Tr. Ent. Soc. Lond., p. 162 (1893).

" *chirimoliæ* " Tr. Am. Ent. Soc., xx, p. 51 (1893).

" *longulum* " Bull. Bot. Dep. Jam., p. 18 (1894).

" " Craw, 5th Bien. Rep. Cal. Bd. Hort., p. 46 (1896).

" " Green, Ind. Mus. Notes, iv, p. 8 (1896).

" " var. *chirimoliæ* Ckll., Check List, p. 331 (1896).

" " Mask., N. Z. Trans., xxix, p. 310 (1897).

" " Dolby-Tyler, Ent. Mon. Mag., xxxiii, p. 85 (1899).

" " deCharms, Pr. Soc. Amic. Scien., p. 40 (1899).

" " Ckll. & Parr., The Industrialist, p. 229 (1899).

" " Lefroy, Scale Ins. Less. Antil., p. 45 (1901).

Coccus " Kirkaldy, Fauna Haw., iii, pt. 2, p. 106 (1902).

Lecanium " Thro, Bull. 209, Corn. Univ. Exp. Sta., p. 214 (1903).

Habitat.—Hawaiian Islands; New Zealand; Fiji; India; China; Mauritius; England; Mexico; Mass.: N. Y.; Ga.; Grenada; Barbados; Antigua; Jamaica.

On Psidium; Bambusa; Acacia; Citrus; Myrica; Ficus; Averrhoa; Carica Papaya; Anona tripetala; Monstera deliciosa; Cassia fistula; Euphorbia; Albizzia; palms: Grevillea; ferns.

851. Coccus maculatus (Sign.).

Lecanium maculatum Sign., Ann. Soc. Ent. Fr., (5), iii, p. 400 (1873).

“ “ Mask., N. Z. Trans., xi, p. 207 (1878).

“ “ “ Ins. Nox. Agr. N. Z., p. 81 (1887).

Habitat.—Europe; New Zealand.

On Bavardia; ivy.

852. Coccus mangiferæ (Green).

Lecanium mangiferæ Green, Ent. Mon. Mag., xxv, p. 249 (1889).

“ “ “ Ins. Life, ii, p. 48 (1889).

“ “ Ckll., Tr. Am. Ent. Soc., xx, p. 49 (1893).

“ “ “ Bull. Bot. Dep. Jam., p. 19 (1894).

“ “ Green, Ind. Mus. Notes, iv, p. 9 (1896).

“ “ Ckll. & Parr., The Industrialist, p. 228 (1899).

“ “ Lefroy, Scale Ins. Less. Antil., p. 47 (1901).

Habitat.—Ceylon; Grenada; Jamaica; Trinidad; Barbados; Antigua.

On mango; cinnamon; nutmeg; bread-fruit; jasmine; Allamanda; Sapodilla; Ixora.

853. Coccus melaleucæ (Mask.).

Lecanium melaleucæ Mask., N. Z. Trans., xxx, p. 239 (1898).

“ “ King, Can. Ent., xxxiv, p. 60 (1902).

Habitat.—Australia; China; Mass. (Harvard Bot. Gardens).

On Melaleuca; Monstera deliciosa.

854. Coccus minimus (Newst.).

Lecanium minimum Newst., Ent. Mon. Mag., xxviii, p. 141 (1892).

“ “ Ckll., Journ. Inst. Jam., i, p. 278 (1893).

“ “ Mask., Ent. Mon. Mag., xxxii, p. 225 (1896).

“ “ Lounsb., Rep. Ent. Cape Good Hope, p. 19 (1897).

Coccus (Lecanium) minimus Ckll., Ann. Mag. N. H., (7), xi, p. 162 (1903).

Habitat.—England; Mexico.

On Areca; Abutilon; “ fan-palm.”

Coccus minimus pinicola (Mask.).

Lecanium minimum var. pinicola Mask., N. Z. Trans., xxix, p. 310 (1897).

“ Calymnatus “ Ckll. & Parr., The Industrialist, p. 230 (1899).

Habitat.—Cape of Good Hope.

On Pinus insignis.

855. Coccus nanus (Ckll.).

Lecanium nanum Ckll., Psyche, vii, Suppl., i, p. 19 (1896).

Habitat.—Trinidad.

On “ Balata.”

856. *Coccus notatus* (Mask.).

Lecanium notatum Mask., Ent. Mon. Mag., xxxiii, p. 243 (1897).

Habitat.—Japan.

On *Pittosporum*; *Thea*; *Ilex cornuta*.

857. *Coccus ophiorrhizæ* (Green).

Lecanium ophiorrhizæ Green, Ind. Mus. Notes, iv, p. 10 (1896).

“ “ Ckll. & Parr., The Industrialist, p. 164 (1899).

Habitat.—Ceylon.

On *Ophiorrhiza pectinata*.

858. *Coccus perlatus* (Ckll.).

Lecanium perlatus Ckll., The Entom., xxxi, p. 65 (1898).

Habitat.—Azores.

On orange.

859. *Coccus piperis* (Green).

Lecanium piperis Green, Ind. Mus. Notes, iv, p. 10 (1896).

“ “ Ckll. & Parr., The Industrialist, p. 164 (1899).

Habitat.—Ceylon.

On wild pepper.

860. *Coccus pseudoesperidum* (Ckll.).

Lecanium pseudoesperidum Ckll., Am. Nat., xxix, p. 380 (1895).

Habitat.—Canada.

On *Cattleya*.

861. *Coccus rubellus* (Ckll.).

Lecanium rubellum Ckll., Journ. Inst. Jam., i, p. 398 (1893).

“ “ “ Bull. Bot. Dep. Jam., p. 19 (1894).

Habitat.—Jamaica.

862. *Coccus schini* (Ckll.).

Lecanium schini Ckll., La Naturaleza, (2), ii, p. 304 (1893).

“ “ “ Mem. Revist. Soc. Cien., vi, p. 325 (1893).

“ “ “ Bull. Soc. Zool. Fr., xviii, p. 167 (1893).

“ “ “ & Parr., The Industrialist, p. 228 (1899).

“ “ “ Biol. Centr. Amer., ii, pt. 2, p. 10 (1899).

Habitat.—Mexico.

On “Nancem”; “a Hibiscus-like shrub.”

863. *Coccus terminaliæ* (Ckll.).

Lecanium terminaliæ Ckll., Journ. Inst. Jam., i, p. 254 (1893).

“ “ “ Ann. Mag. N. H., (6), xii, p. 52 (1893).

“ “ “ Bull. Bot. Dep. Jam., i, n. s., p. 18 (1894).

“ “ “ Mask., Ent. Mon. Mag., xxxiii, p. 243 (1897).

“ “ “ Ckll. & Parr., The Industrialist, p. 230 (1899).

Habitat.—Jamaica; Mexico.

On *Terminalia* (almond).

864. *Coccus ventralis* (Ehrh.).

Lecanium ventrale Ehrh., Can. Ent., xxx, p. 245 (1898).

" " Ckll. & Parr., The Industrialist, p. 230 (1899).

Habitat.—California (in Japanese nursery); Japan?

865. *Coccus viridis* (Green).

Lecanium viride Green, Ent. Mon. Mag., xxv, p. 248 (1889).

" " Cotes, Ind. Mus. Notes, i, pp. 49, 117 (1889).

" " " Ins. Life, ii, p. 17 (1889).

" " " Ind. Mus. Notes, ii, p. 168 (1893).

" " " " " " iii, No. 6, p. 18 (1894).

" " Ckll., Pr. U. S. Nat. Mus., xvii, p. 619 (1895).

" " Green. Cocc. Ceylon, pt. i, pp. 1, 2, 7 (1896).

" " " Rep. Roy. Bot. Gard., Ceylon, p. 14 (1899).

" " deCharm., Pr. Soc. Amic. Scien., p. 41 (1899).

" " Hemp., Rev. Mus. Paul., iv, p. 434 (1900).

" " Zimm., Bull. Inst. Bot. Buitenzorg, No. 10, p. 25 (1901).

Habitat.—Ceylon; Brazil; Mauritius.

On *Cinchona*; *Citrus*; *Gardenia*; guava; tea; coffee.

***Coccus viridis africanus* (Newst.).**

Lecanium viride var. *africanum* Newst., Ent. Mon. Mag., xxxiv, p. 95 (1898).

Habitat.—West Africa.

On coffee leaves.

866. *Coccus watti* (Green).

Lecanium watti Green, Ind. Mus. Notes, v, p. 6 (1900).

Habitat.—Assam.

On tea plant.

Genus *MESOLECANIUM* Ckll. Type, nocturnum.

Mesolecanium Ckll., Ann. Mag. N. H., (7), ix, p. 451 (1902).

867. *Mesolecanium baccharidis* (Ckll.).

Lecanium baccharidis Ckll., Am. Nat., xxix, p. 174 (1895).

" " Berl., Riv. Pat. Veg., iv, p. 379 (1896).

" " Iher., Rev. Mus. Paul., ii, p. 408 (1897).

" " Hemp., " " " iv, p. 435 (1900).

Mesolecanium " Ckll., Ann. Mag. N. H., (7), ix, p. 452 (1902).

Habitat.—Brazil.

On *Baccharis dracunculifolia*.

868. *Mesolecanium batatæ* (Ckll.).

Lecanium batatæ Ckll., Ann. Mag. N. H., (6), xvi, p. 61 (1895).

Mesolecanium " " " " (7), ix, p. 452 (1902).

Habitat.—Antigua.

On roots of *Ipomœa batatas* (sweet potato).

869. Mesolecanium(?) campomanesiæ (Hemp.).

Lecanium campomanesiæ Hemp., Rev. Mus. Paul., iv, p. 447 (1900).

" " " Ann. Mag. N. H., (7), vii, p. 218 (1901).

Mesolecanium(?) " Ckll., " " " " ix, p. 452 (1902).

Habitat.—Brazil.

On Campomanesia.

870. Mesolecanium impar (Ckll.).

Lecanium impar Ckll., The Entom., xxxi, p. 131 (1898).

Mesolecanium impar Ckll., in litt. (1902).

Habitat.—Mexico.

On "Escobillo."

871. Mesolecanium(?) jaboticabæ (Hemp.).

Lecanium jaboticabæ Hemp., Rev. Mus. Paul., iv, p. 443 (1900).

" " " Ann. Mag. N. H., (7), vii, p. 216 (1901).

Mesolecanium(?) " Ckll., " " " " ix, p. 452 (1902).

Habitat.—Brazil.

On Eugenia jaboticaba.

872. Mesolecanium mayteni (Hemp.).

Lecanium mayteni Hemp., Rev. Mus. Paul., iv, p. 438 (1900).

" " " Ann. Mag. N. H., (7), vii, p. 214 (1901).

Mesolecanium " Ckll., " " " " ix, p. 452 (1902).

Habitat.—Brazil.

On Maytenus.

873. Mesolecanium nocturnum (Ckll. & Parr.).

Lecanium nocturnum Ckll. & Parr., Biol. Centr. Amer., ii, pt. 2, p. 13 (1899).

Mesolecanium " " Ann. Mag. N. H., (7), ix, p. 451 (1902).

Lecanium " Thro, Bull. 209, Corn. Univ. Exp. Sta., p. 211 (1903).

Habitat.—Mexico.

On "huele de noche."

874. Mesolecanium(?) obscurum (Hemp.).

Lecanium obscurum Hemp., Can. Ent., xxxii, p. 5 (1900).

" " " Rev. Mus. Paul., iv, p. 441 (1900).

Mesolecanium(?) " Ckll., Ann. Mag. N. H., (7), ix, p. 452 (1902).

Habitat.—Brazil.

On Maytenus associated with ants.

875. Mesolecanium perditum (Ckll.).

Lecanium (Eulecanium) perditum Ckll., Can. Ent., xxix, p. 267 (1897).

Mesolecanium " " in litt. (1902).

Habitat.—Mexico.

876. Mesolecanium phoradendri (Ckll.).

Lecanium phoradendri Ckll., Ann. Mag. N. H., (6), xiv, p. 13 (1894).

Mesolecanium " " " " (7), ix, p. 452 (1902).

Habitat.—Arizona.

On *Phoradendron*.

877. Mesolecanium pseudosemen (Ckll.).

Lecanium pseudosemen Ckll., Can. Ent., xxvii, p. 202 (1895).

" " " Rev. Mus. Paul., ii, p. 70 (1897).

" " Hemp., " " " iv, p. 444 (1900).

Mesolecanium " Ckll., Ann. Mag. N. H., (7), ix, p. 452 (1902).

Habitat.—Brazil.

On *Solanum paniculatum*.

878. Mesolecanium rhizophoræ (Ckll.).

Lecanium rhizophoræ Ckll., Rev. Mus. Paul., iii, p. 501 (1898).

" " Hemp., " " " iv, p. 437 (1900).

Mesolecanium " Ckll., in litt. (1902).

Habitat.—Brazil.

On *Rhizophora mangle*.

Genus **NEOLECANIUM** Parr. Type, imbricatum.

s. g. *Neolecanium* Parr., Can. Ent., xxxiii, p. 58 (1901): g. Ckll., Ann. Mag. N. H., (7), ix, p. 451 (1902).

879. Neolecanium chilaspidis (Ckll.).

Lecanium chilaspidis Ckll., Can. Ent., xxix, p. 268 (1897).

" " " Biol. Centr. Amer., ii, pt. 2, p. 11 (1899).

Neolecanium " " Ann. Mag. N. H., (7), ix, p. 451 (1902).

Habitat.—Mexico.

On *Chilopsis linearis*?

880. Neolecanium cornuparvum (Thro).

Lecanium cornuparvum Thro, Bull. 209, Corn. Univ. Exp. Sta., p. 216 (1903).

Neolecanium " Ckll., in litt. (1903).

Habitat.—New York.

On *Magnolia*.

881. Neolecanium herrerae Ckll.

Neolecanium herrerae Ckll., Bol. Com. Paras. Agric., i, p. 338 (1902).

Habitat.—Mexico.

On *Agave*.

882. Neolecanium imbricatum (Ckll.).

Lecanium imbricatum Ckll., Psyche, vii, Suppl., i, p. 19 (1896).

" " " Bull. 4, T. s., Dep. Ag., p. 38 (1896).

" " " Biol. Centr. Amer., ii, pt. 2, p. 11 (1899).

Neolecanium " " Ann. Mag. N. H., (7), ix, p. 451 (1902).

Habitat.—Mexico: New Mexico.

On *Mimosa*.

883. Neolecanium leucænæ Ckll.

Neolecanium leucænæ Ckll., The Entom., xxxvi, p. 46 (1903).

" " " Ann. Mag. N. H., (7), xi, p. 162 (1903).

Habitat.—Mexico.

On Leucæna; Mimosa.

884. Neolecanium manzanillense Ckll.

Neolecanium manzanillense Ckll., Ann. Mag. N. H., (7), xi, p. 161 (1903).

Habitat.—Mexico.

885. Neolecanium perconvexum (Ckll.).

Lecanium perconvexum Ckll., The Entom., xxxi, p. 132 (1898).

" " " Rev. Mus. Paul., iii, p. 41 (1898).

" " " Hemp., " " " iv, p. 422 (1900).

Neolecanium " Ckll., Ann. Mag. N. H., (7), ix, p. 451 (1902).

Habitat.—Brazil.

On Nectandra.

886. Neolecanium plebeium Ckll.

Neolecanium plebeium Ckll., Ann. Mag. N. H., (7), xi, p. 161 (1903).

Habitat.—Mexico.

On bark of "Higuerra" (Ficus sp.).

887. Neolecanium(?) sallei (Sign.).

Lecanium sallei Sign., Ann. Soc. Ent. Fr., (5), iii, p. 410 (1873).

" " " Comst., 2nd Rep. Dep. Ent. Corn. Univ., p. 135 (1883).

Neolecanium(?) sallei Ckll., Ann. Mag. N. H., (7), ix, p. 451 (1902).

Habitat.—Mexico.

888. Neolecanium silveirai (Hemp.).

Lecanium silveirai Hemp., Can. Ent., xxxii, p. 5 (1900).

" " " Rev. Mus. Paul., iv, p. 424 (1900).

Neolecanium " Ckll., Ann. Mag. N. H., (7), ix, p. 451 (1902).

Habitat.—Brazil.

On roots of grape vine.

889. Neolecanium tuberculatum (Townsend & Ckll.).

Lecanium tuberculatum Townsend & Ckll., Jn. N. Y. Ent. Soc., vi, p. 177 (1898).

Neolecanium " Ckll., Ann. Mag. N. H., (7), ix, p. 451 (1902).

Habitat.—Mexico.

On "Cafetillo."

890. Neolecanium urichi (Ckll.).

Lecanium urichi Ckll., Ent. News, v, p. 203 (1894).

" " " Bull. Bot. Dep. Jam., p. 69 (1894).

" " " Jn. Trin. Nat. Club, ii, p. 306 (1896).

" " " Rev. Mus. Paul., iv, p. 423 (1900).

Neolecanium " " Ann. Mag. N. H., (7), ix, p. 451 (1902).

Habitat.—Trinidad; Grenada; Brazil.

On Smilax campestris; In nests of Cremastogaster brevispinosa.

Genus **AKERMES** Ckll. Type, *bruneri*.

Akermes Ckll., Can. Ent., xxxiv, pp. 89, 90 (1902).

891. *Akermes bruneri* Ckll.

Akermes bruneri Ckll., Can. Ent., xxxiv, p. 89 (1902).

Habitat.—Paraguay.

892. *Akermes colimæ* Ckll.

Akermes colimæ Ckll., The Entom., xxxvi, p. 47 (1903).

Habitat.—Mexico.

893. *Akermes levis* (Mask.).

Lecanium scrobiculatum var. *leve* Mask., N. Z. Trans., xxviii, p. 392 (1896).

Akermes levis Ckll., Ann. Mag. N. H., (7), ix, p. 453 (1902).

Habitat.—Manly, Australia.

On *Acacia longifolia*.

894. *Akermes monilis* (Ckll.).

Lecanium monile Ckll., Can. Ent., xxvii, p. 203 (1895).

“ “ “ Rev. Mus. Paul., ii, p. 70 (1897).

“ “ Hemp., “ “ “ iv, p. 446 (1900).

Akermes monilis Ckll., Ann. Mag. N. H., (7), ix, p. 453 (1902).

Habitat.—Brazil.

895. *Akermes pinguis* (Mask.).

Lecanium pingue Mask., N. Z. Trans., xxvii, p. 58 (1894).

“ *scrobiculatum* var. *pingue* Mask., N. Z. Trans., xxviii, p. 392 (1896).

Akermes pinguis Ckll., Ann. Mag. N. H., (7), ix, p. 453 (1902).

Habitat.—Australia.

On *Dillwynia juniperina*.

896. *Akermes punctatus* (Ckll.).

Lecanium punctatum Ckll., Jn. Trin. Nat. Club, ii, p. 194 (1895).

Akermes punctatus “ Ann. Mag. N. H., (7), ix, p. 453 (1902).

Habitat.—Grenada.

On *Citrus medica* var. *acida*.

897. *Akermes scrobiculatus* (Mask.).

Lecanium scrobiculatum Mask., N. Z. Trans., xxv, p. 221 (1892).

“ “ “ “ “ xxvii, p. 58 (1894).

“ “ “ “ “ xxviii, p. 391 (1896).

Habitat.—Australia.

On *Acacia*.

898. *Akermes townsendi* (Ckll.).

Lecanium townsendi Ckll., Ann. Mag. N. H., (7), i, p. 433 (1898).

Akermes “ “ “ “ “ ix, p. 453 (1902).

Habitat.—Mexico.

On orange.

899. Akermes verrucosus (Sign.).

Lecanium verrucosum Sign., Ann. Soc. Ent. Fr., (5), iii, p. 442 (1873).

" " Comst., 2nd Rep. Dep. Ent. Corn. Univ., p. 136 (1883).

Saissetia verrucosa Ckll., The Ent. Student, ii, p. 33 (1901).

Akermes verrucosus " Can. Ent., xxxiv, p. 90 (1902).

Habitat.—Montevideo.

Genus **TOUMEYELLA** Ckll. Type, *mirabilis*.

s. g. *Toumeyella* Ckll., Psyche, vii, Suppl., i, p. 2 (1895); g. Can. Ent., xxxiii, p. 58 (1901).

900. Toumeyella mirabilis (Ckll.).

Lecanium mirabile Ckll., Psyche, vii, Suppl., i, p. 3 (1895).

Toumeyella mirabilis " Pr. Ent. Soc. Wash., iv, p. 297 (1896).

" " " Ann. Mag. N. H., (7), ix, p. 452 (1902).

Habitat.—Arizona; Mexico.

On Mesquite.

901. Toumeyella parvicornis (Ckll.).

Lecanium parvicorne Ckll., Psyche, viii, pp. 90, 91 (1897).

Toumeyella parvicornis " Ann. Mag. N. H., (7), ix, p. 452 (1902).

Habitat.—Florida.

On pine.

902. Toumeyella(?) pini (King).

Lecanium pini King, Can. Ent., xxxiii, p. 334 (1901).

Toumeyella(?) pini Ckll., Ann. Mag. N. H., (7), ix, p. 452 (1902).

Lecanium corrugatum Thro, Bull. 209, Corn. Univ. Exp. Sta., p. 216 (1903).

Toumeyella " Ckll., in litt. (1903).

Habitat.—Ontario, Canada; New York.

On *Pinus Austriaca*.

903. Toumeyella quadrifasciata (Ckll.).

Lecanium quadrifasciatum Ckll., Psyche, vii, Suppl., i, p. 3 (1895).

" " " Am. Nat., xxxi, p. 591 (1897).

Toumeyella quadrifasciata " Ann. Mag. N. H., (7), ix, p. 452 (1902).

Habitat.—Organ Mts., New Mexico.

On *Robinia neomexicana*.

904. Toumeyella(?) sonorensis (Ckll. & Parr.).

Lecanium sonorensis Ckll. & Parr., The Industrialist, p. 161 (1899).

Toumeyella(?) sonorensis Ckll., Ann. Mag. N. H., (7), ix, p. 452 (1902).

Habitat.—Mexico.

On *Beloperone californica*.

905. Toumeyella turgida (Ckll.).

Lecanium turgidum Ckll., Psyche, viii, p. 152 (1897).

" " Rolfs & Quaint., Cocc. Amer., Dec. i-ii, No. 4 (1898).

Toumeyella turgida Ckll., Ann. Mag. N. H., (7), ix, p. 452 (1902).

Habitat.—Florida.

On *Magnolia glauca*; *M. grandiflora*.

Genus **EULECANIUM** Ckll. Type, *tiliæ*.

s. g. *Eulecanium* Ckll., Check List, Coccidæ, p. 332 (1896); g. Can. Ent., xxxiii, p. 58 (1901); The Entom., xxxiv, p. 91 (1901); King, Can. Ent., xxxiii, p. 314, note (1901).

906. *Eulecanium aceris* (Curt.).

Coccus aceris campestris Schr., Faun. Boica, ii, pt. 1, p. 147 (1801).

“ “ Curt., Brit. Ent., p. 717 (1838) male.

Lecanium “ Bouché, Stett. Ent. Zeit., v, p. 299 (1844).

“ “ Baer., D'Alton, Zeit. für Zool., p. 169 (1849).

“ “ Sign., Ann. Soc. Ent. Fr., (4), viii, p. 842 (1868).

“ “ “ “ “ “ (5), iii, p. 410 (1873).

“ “ Altum, Forstzoologie, iii, pt. ii, p. 368 (1881).

“ “ Dougl., Ent. Mon. Mag., xxi, p. 38 (1884).

“ (*Eulecanium*) *aceris* Ckll., Check List, p. 332 (1896).

Habitat.—Europe.

On maple; sycamore; elm.

907. *Eulecanium*(?) *adenostomæ* (Kuw.).

Lecanium adenostomæ Kuw., Pr. Cal. Ac. Sci., (3), ii, p. 402 (1901).

Eulecanium(?) “ Ckll., in litt. (1902).

Habitat.—California.

On *Adenostoma fasciculatum*.

908. *Eulecanium æsculi* (Kollar).

Coccus æsculi Koll., Sitz. Akad. Wiss. Wien, i, pt. 2, p. 15 (1848).

Lecanium “ Sign., Ann. Soc. Ent. Fr., (5), iii, p. 412 (1873).

“ “ Dougl., Ent. Mon. Mag., xxi, p. 38 (1884).

“ (*Eulecanium*) *æsculi* Ckll., Check List, p. 332 (1896).

Habitat.—Europe.

On horse-chestnut?

909. *Eulecanium alni* (Mod.).

Coccus alni Mod., Act. Goth., p. 23 (1778).

“ “ Gmel., Syst. Nat., Ed. xiii, p. 2221 (1789).

“ “ Turton, “ “ p. 716 (1801).

“ “ Schr., Faun. Boica, ii, pt. i, p. 144 (1801).

Lecanium alni Sign., Ann. Soc. Ent. Fr., (4), viii, p. 843 (1868).

“ “ Dougl., Ent. Mon. Mag., xxiii, p. 80 (1886).

Eulecanium “ Ckll., The Entom., xxxiv, p. 92 (1901).

Habitat.—England.

On *Alnus glutinosa*.

Eulecanium alni rufulum Ckll.

Eulecanium alni var. *rufulum* Ckll., Psyche, x, p. 21 (1903).

Habitat.—France.

On Carpinus.

910. Eulecanium antennatum (Sign.).

Lecanium antennatum Sign., Ann. Soc. Ent. Fr., (5), iii, p. 413 (1873).

“ “ Comst., 2nd Rep. Dep. Ent. Corn. Univ., p. 132 (1883).

“ “ Ckll., Can. Ent., xxvii, p. 35 (1895).

“ (Eulecanium) *antennatum* Ckll., Check List, p. 332 (1896).

Habitat.—Canada; Mass.; N. Y.

On oak.

911. Eulecanium armeniacum (Craw).

(*Apricot scale*.)

Lecanium armeniacum Craw, Rep. Cal. Bd. Hort., p. 12 (1891).

“ “ Mask., N. Z. Trans., xxvii, p. 59 (1894).

“ “ Craw, 4th Bien. Rep. Cal. Bd. Hort., p. 97 (1894).

“ “ “ Rep. Cal. Exp. Sta., p. 268 (1896).

“ “ Felt, Bull. 17, n. s., Dep. Ag., p. 22 (1898).

“ “ “ “ 23, N. Y. St. Mus., p. 240 (1898).

“ “ “ 14th Rep. Ins. N. Y., p. 240 (1898).

“ “ Webster, Can. Ent., xxx, p. 81 (1898).

“ (Eulecanium) *armeniaceum* Ckll. & Parr., The Industrialist, p. 233 (1899).

“ *armeniaceum* Ckll., Jn. N. Y. Ent. Soc., vii, p. 257 (1899).

“ “ Hunter, Kan. Univ. Quar., viii, p. 71 (1899).

“ “ King, Psyche, ix, p. 117 (1900).

“ “ Pettit, Bull. 200, Mich. Exp. Sta., p. 181 (1902).

Eulecanium “ King, Can. Ent., xxxiv, p. 60 (1902).

Habitat.—Can.; Mass.; N. Y.; Ohio; Kans.; Cal.; Mexico.

On apricot; pear; plum; cherry; grape; gooseberry; peach; Spanish chestnut; prune.

912. Eulecanium(?) assimile (Newst.).

Lecanium assimile Newst., Ent. Mon. Mag., xxviii, p. 141 (1892).

“ “ Ckll., Tr. Am. Ent. Soc., xx, p. 53 (1893).

“ “ King & Reh, Jahrb. Hamb. Wiss. Anst., xviii, p. 3 (1900).

Eulecanium(?) “ Ckll., in litt. (1902).

Habitat.—Europe.

On *Grindelia hirsuta*.

Eulecanium(?) assimile amaryllidis (Ckll.).

Lecanium assimile var. *amaryllidis* Ckll., Tr. Am. Ent. Soc., xx, p. 53 (1893).

“ “ “ “ Journ. Inst. Jam., i, p. 254 (1893).

“ “ “ “ Bull. Bot. Dep. Jam., p. 19 (1894).

Habitat.—Antigua.

On *Amaryllis*.

913. *Eulecanium aurantiacum* (Hunter).

- || *Lecanium macluræ* Hunter, Kan. Univ. Quar., viii, p. 67 (1899).
 " *aurantiacum* " " " " ix, p. 107 (1900).
 " " " Studies in Ins. Life, p. 187 (1902).
 " (*Eulecanium*) *aurantiacum* Ckll. & Parr., The Industrialist, p. 237 (1899).
 Habitat.—Kansas.
 On osage-orange.

914. *Eulecanium berberidis* (Schr.).

- Coccus berberidis* Schr., Faun. Boica, ii, pt. i, p. 146 (1801).
 " " Loew, Verh. z. b. Ges., Wien, xii, p. 110 (1872).
Lecanium " Sign., Ann. Soc. Ent. Fr., (5), iii, p. 403 (1873).
 " " Kalt., Die Pflanz., p. 19 (1874).
 ? " " Mask., N. Z. Trans., xxix, p. 311 (1897).
 " " Berl. e Leon., Cherm. Ital., Fasc. ii, No. 49 (1897).
 " (*Eulecanium*) *berberidis* Ckll. & Parr., The Industrialist, p. 237 (1899).
 Habitat.—Australia: France.
 On *Vitis vinifera*: barberry.

***Eulecanium berberidis major* (Mask.).**

- Lecanium berberidis* var. *major* Mask., N. Z. Trans., xxx, p. 238 (1897).
 Habitat.—Australia.

915. *Eulecanium bituberculatum* (Targ.).

- Lecanium bituberculatum* Targ., Catalogue, p. 38 (1869).
 " " Sign., Ann. Soc. Ent. Fr., (5), iii, 414 (1873).
 " " Dougl., Ent. Mon. Mag., xxv, p. 59 (1888).
 " " Newst., " " " xxxii, p. 58 (1896).
 " " Lampa, Entom. Tidskr., xvii, p. 170 (1896).
 " (*Eulecanium*) *bituberculatum* Ckll. & Parr., The Industrialist, pp. 233, 237 (1899).
 Habitat.—England; France; Sweden; Italy; Oregon.
 On apple; *Cratægus oxyacantha*.

916. *Eulecanium canadense* (Ckll.).

- Lecanium caryæ* var. *canadense* Ckll., Can. Ent., xxvii, p. 253 (1895).
 " " " " Harvey, Rep. Me. Exp. Sta., p. 107 (1894-95).
 " *canadense* Ckll., Can. Ent., xxx, p. 294 (1898).
 " " King, " " " xxxi, p. 252 (1899).
 " (*Eulecanium*) *canadense* Ckll. & Parr., The Industrialist, p. 232 (1899).
 " *canadense* Hunter, Kan. Univ. Quar., viii, p. 68 (1899).
 " " " " " " ix, p. 107 (1900).
 " " King, Can. Ent., xxxiii, p. 195 (1901).
Eulecanium " " " " " " p. 333 (1901).
 Habitat.—Can.; Nova Scotia; Me.; Mass.; Kans.; Ohio.
 On elm; maple; hickory; white oak; peach.

917. *Eulecanium capreae* (Linn.).

- — Reaum., Mem. Ins., iv, p. 60, pl. 5, fig. 2 (1738).
Coccus capreae Linn., Syst. Nat., Ed. xii, i, p. 741 (1766).
 “ “ Fab., Gen. Ins., p. 304 (1776).
 “ rotundus salicis DeGeer, Mem. Ins., vi, p. 440, pl. 28 (1776).
 “ capreae Mod., Act. Goth., i, p. 22 (1778).
 “ “ Gmel., Syst. Nat., Ed. xiii, i, p. 2218 (1789).
Chermes salicis Oliv., Ency. Meth., vii, p. 439 (1792).
Coccus “ Fab., Ent. Syst., iv, p. 226 (1794).
 “ “ Turton, Syst. Nat., ii, pt. 1, p. 713 (1801).
 “ “ Fab., Syst. Rhyng., p. 309 (1803).
 “ “ Bechst., Forstins., i, p. 287 (1804).
 “ gibber Dalm., K. Vet. Akad. Handl., p. 366 (1825).
 “ cypreola Dalm., K. Vet. Akad. Handl., p. 367 (1825).
 “ capreae Fonsc., Ann. Soc. Ent. Fr., iii, p. 213 (1834).
 “ gibba Westw., Mod. Class. Ins., ii, p. 445 (1840).
Lecanium salicis Bouché, Stett. Ent. Zeit., xii, p. 112 (1851).
Pulvinaria “ Sign., Ann. Soc. Ent. Fr., (5), iii, p. 44 (1873).
Lecanium capreae “ “ “ “ “ “ “ p. 415 (1873).
 “ gibber “ “ “ “ “ “ “ p. 422 (1873).
Pulvinaria salicis Putn., Pr. Dav. Ac. Sci., p. 339 (1879).
 “ “ Comst., 2nd Rep. Dep. Ent. Corn. Univ., p. 137 (1883).
Lecanium gibber Dougl., Ent. Mon. Mag., xxiv, p. 165 (1887).
 “ capreae “ “ “ “ “ “ “ xxviii, p. 278 (1892).
 “ (Eulecanium) capreae Ckll., Check List, p. 332 (1896).
Eulecanium capreae King, Can. Ent., xxxiii, p. 314 (1901).
 Habitat.—Europe: Nova Scotia.
 On Salix; linden; poplar; Pyrus malus; P. communis; Prunus domestica, etc.

918. *Eulecanium caryae* (Fitch).

- Lecanium caryae* Fitch, 3rd Rep. Ins. N. Y., p. 443 (1856).
 “ “ Sign., Ann. Soc. Ent. Fr., (5), iii, p. 416 (1873).
 “ “ Comst., Rep. U. S. Dep. Ag., 1880, p. 364 (1881).
 “ “ Pack., Shade Trees, p. 75 (1881).
 “ “ Comst., 2nd Rep. Dep. Ent. Corn. Univ., p. 133 (1883).
 “ “ Pack., 5th Rep. U. S. Ent. Com., p. 298 (1890).
 “ “ Coq., Ins. Life, iii, p. 383 (1891).
 “ (Eulecanium) caryae Ckll., Check List, p. 332 (1896).
 “ caryae King, Can. Ent., xxxi, p. 141 (1899).
 “ “ “ Ent. News, xii, p. 50 (1901).
Eulecanium “ “ Can. Ent., xxxiv, p. 160 (1902).
 Habitat.—Canada: Nova Scotia: Maine; Mass.; Ohio.
 On elm; hickory; wild red cherry.

919. Eulecanium caryarum (Ckll.).

Lecanium (*Eulecanium*) *caryarum* Ckll., Can. Ent., xxx, p. 293 (1898).

" " " " & Parr., *The Industrialist*, p. 233 (1899).

Eulecanium caryarum King, Can. Ent., xxxiv, p. 160 (1902).

Habitat.—Ontario, Canada.

On *Carya alba*.

920. Eulecanium cerasi (Goethe).

Lecanium cerasi Goethe, *Jahrb. Nass. Ver. Nat.*, xxxvii, p. 125 (1884).

" " Dougl., *Ent. Mon. Mag.*, xxiii, p. 28 (1886).

" (*Eulecanium*) *cerasi* Ckll., *Check List*, p. 332 (1896).

" *cerasi* Frank & Kruger, *Schildlausbuch*, p. 110 (1900).

Habitat.—Germany; England.

On cherry; plum; laurel.

921. Eulecanium cerasifex (Fitch).

Lecanium cerasifex Fitch, 3rd Rep. Ins. N. Y., p. 368 (1856).

" " Sign., *Ann. Soc. Ent. Fr.*, (5), vi, p. 612 (1876).

" " Comst., 2nd Rep. Dep. Ent. Corn. Univ., p. 133 (1883).

" " Saund., *Ins. Inj. to Fruits*, p. 203 (1883).

" " Ckll., Can. Ent., xxvii, p. 60 (1895).

" " Davis, *Bull.* 121, *Mich. Exp. Sta.*, p. 416 (1895).

" (*Eulecanium*) *cerasifex* Ckll., *Check List*, p. 332 (1896).

" *cerasifex* Smith, *Bull.* 136, *N. J. Exp. Sta.*, p. 583 (1897).

" " Lowe, 16th Rep. N. Y. Exp. Sta., p. 447 (1898).

" " Felt, *Bull.* 17, n. s., *Dep. Ag.*, p. 22 (1898).

" " Barrows, *Bull.* 160, *Mich. Exp. Sta.*, p. 416 (1898).

" " Felt, 14th Rep. Ins. N. Y., p. 240 (1898).

" " Lugger, 6th Rep. Minn. Exp. Sta., p. 217 (1900).

" " Fletcher, *Trans. Roy. Soc. Can.*, p. 219 (1900).

Eulecanium " King, Can. Ent., xxxiv, p. 60 (1902).

Habitat.—Can.; N. E. States; N. Y.; N. J.; D. C.; Mich.; Minn.

On cherry; plum; peach; apple; pear; maple; oak; ash.

922. Eulecanium(?) cerasorum (Ckll.).

Lecanium cerasorum Ckll., *Psyche*, ix, p. 71 (1900).

Eulecanium(?) " " in litt. (1902).

Habitat.—Japan.

On cherry.

923. Eulecanium ciliatum (Dougl.).

Lecanium ciliatum Dougl., *Ent. Mon. Mag.*, xxvii, p. 67 (1891).

" (*Eulecanium*) *ciliatum* Ckll., *Check List*, p. 332 (1896).

Habitat.—Europe.

On *Quercus robur*.

Eulecanium ciliatum var. a. Ckll.

Eulecanium ciliatum var. a. Ckll., Psyche, x, p. 20 (1903).

Habitat.—France.

924. *Eulecanium cockerelli* (Hunter).

Lecanium cockerelli Hunter, Kan. Univ. Quar., viii, p. 70 (1899).

“ “ King, Can. Ent., xxxi, p. 252 (1899).

Eulecanium " Ckll., in litt. (1902).

Habitat.—Kansas; Nebraska; Ohio; Massachusetts.

On elm; oak; walnut; plum; peach; pear; sweet-fern.

925. *Eulecanium corni* (Bouché).

Lecanium corni Bouché, Stett. Ent. Zeit., v, p. 298 (1844).

“ Sign., Ann. Soc. Ent. Fr., (5), iii, p. 417 (1873).

“ Kalt., Die Pflanz., pp. 261, 296 (1874).

“ Henschel, Die Schädfl. Forst. & Obst. Ins., p. 511 (1895).

" (Eulecanium) corni Ckl., Check List, p. 332 (1896).

Habitat.—Europe.

On *Cornus sanguinea*; *Ribes rubrum*; *Corylus*; *Pyrus*; *Tilia*.

926. *Eulecanium coryli* (Linn.).

Coccus coryli Linn., Syst. Nat., Ed. x,i, p. 456 (1758).

“ “ “ Faun. Suec., ii, p. 265 (1761).

Chermes " hemisphæricus Geoff., Abr. Ins., p. 507 (1762).

Coccus “ Linn., Syst. Nat., Ed. xii, i, p. 741 (1766).

“ “ Mueller, Faun. Fridl., p. 31 (1767).

“ “ Fab., Syst. Ent., p. 743 (1775).

“ “ Mod., Act. Goth., i, p. 29 (1778).

“ “ Fab., Spec. Ins., ii, p. 394 (1781).

Chermes " Fourc., Ent. Paris., p. 229 (1785).

Coccus " Fab., Mant. Ins., ii, p. 319 (1787).

" " Gmel., Syst. Nat., Ed. xiii, p. 2217 (1789).

“ DeVillers, Syst. Nat., i, p. 560 (1789).

Chermes“ Oliv., Ency. Meth., vii, p. 440 (1792).

Coccus " Fab., Ent. Syst., iv, p. 225 (1794).

“ Turton, Syst. Nat., p. 713 (1801).

" " Fab., Syst. Rhyn., p. 308 (1803).

“ Bechst., Forstins., i, p. 286 (1804).

“ “ “ “ iii. p. 891 (1805).

Lecanium " Blanch., Hist. Nat. Ins., iii, p. 214 (1840).

“ “ Sign., Ann. Soc. Ent. Fr., (5), iii, p. 418 (1873).

Coccus " Kalt., Die Pflanz., p. 638 (1874).

Lecanium " Newst., Jn. Roy. Hor. Soc., xxiii, p. 23 (1900).

" " King & Reh, Jahrb. Hamb. Wiss. Anst., xviii, p. 4 (1900).

Eulecanium coryli Ckll., The Entom., xxxiv, p. 92 (1901).

Habitat.—Europe.

On *Corylus avellana*; currant; gooseberry; raspberry; Cotoneaster.

927. Eulecanium corylifex (Fitch).

Lecanium corylifex Fitch, 3rd Rep. Ins. N. Y., p. 473 (1856).

" " Sign., Ann. Soc. Ent. Fr., (5), iii, p. 419 (1873).

" " Comst., 2nd Rep. Dep. Ent. Corn. Univ., p. 133 (1883).

" (*Eulecanium*) *corylifex* Ckll., Check List, p. 332 (1896).

Eulecanium corylifex King, Can. Ent., xxxiii, p. 314 (1901).

Habitat.—Can.: N. Y.; Mass.

On *Corylus rostrata*: *C. americana*; *Viburnum pubescens*.

928. Eulecanium crawii (Ehrh.).

Lecanium crawii Ehrh., Can. Ent., xxx, p. 245 (1898).

" (*Eulecanium*) *crawii* Ckll. & Parr., The Industrialist, p. 237 (1899).

Habitat.—California.

On *Acer macrophyllum*.

929. Eulecanium cynosbati (Fitch).

Lecanium cynosbati Fitch, 3rd Rep. Ins. N. Y., p. 436 (1856).

" " Sign., Ann. Soc. Ent. Fr., (5), iii, p. 419 (1873).

" " Comst., 2nd Rep. Dep. Ent. Corn. Univ., p. 133 (1883).

" (*Eulecanium*) *cynosbati* Ckll. & Parr., The Industrialist, p. 233 (1899).

Lecanium cynosbati Ckll., Can. Ent., xxxi, p. 140 (1899).

Eulecanium " King, " " xxxiv, p. 159 (1902).

Habitat.—Can., Mass.; N. Y.

On gooseberry; *Gleditschia triacanthos*.

930. Eulecanium distinguendum (Dougl.).

Lecanium distinguendum Dougl., Ent. Mon. Mag., xxvii, p. 96 (1891).

" " " " " " " " xxviii, p. 106 (1892).

" " Luff, " " " " " " " " xxix, p. 139 (1893).

" (*Eulecanium*) *distinguendum* Ckll., Check List, p. 332 (1896).

Habitat.—Great Britain.

On *Vaccinium myrtillum*; *Sarothamnus*.

931. Eulecanium douglasi (Sulc).

Lecanium douglasi Sulc, Ent. Mon. Mag., xxxi, p. 37 (1899).

" (*Eulecanium*) *douglasi* Ckll. & Parr., The Industrialist, p. 237

(1899).

Habitat.—Bohemia.

On *Betula alba*.

932. Eulecanium eugeniæ (Hemp.).

Lecanium eugeniæ Hemp., Rev. Mus. Paul., iv, p. 439 (1900).

" " " " " " " " Ann. Mag. N. H., (7), vii, p. 215 (1901).

Eulecanium " Ckll., " " " " " " " " ix, p. 453 (1902).

Habitat.—Brazil.

On *Eugenia*.

933. Eulecanium fasciatum (Costa).

Chermes ulmi rotundus Geoff., Abr. Ins., i, p. 507 (1762).

Coccus (ovatus *ulmi*) DeG., Mem. Ins., vi, p. 436, pl. 28, figs. 7-15 (1776).

|| " *ulmi* Mod., Act. Goth., i, p. 27 (1778).

|| *Chermes ulmi* Fourc. (not Linn. 1758), Ent. Paris., p. 229 (1785).

Coccus " Gmel. (not Linn.), Syst. Nat., Ed. xiii, p. 2217 (1789).

Chermes " Oliv., Ency. Meth., vii, p. 439 (1792).

" " Latr., Mag. Ency., p. 11 (1796).

Coccus " Turton, Syst. Nat., p. 713 (1801).

Calypticus fasciatum Costa, Faun. Reg. Nap., Cocc., p. 14 (1835).

Lecanium fasciatum Walk., Cat. Br. Mus., Hom., p. 1078 (1852).

" " Targ., Catalogue, p. 37 (1869).

" *ulmi* Sign., Ann. Soc. Ent. Fr., (5), iii, p. 432 (1873).

" " Dougl., Ent. Mon. Mag., xxiii, p. 79 and note (1886).

" (*Eulecanium*) *ulmi* var. *fasciatum* Ckll., Check List, p. 332 (1896).

" *ulmi* Ckll., Pr. Ac. N. Sci. Ph., p. 271 (1899).

Habitat.—Europe.

On elm.

934. Eulecanium fitchii (Sign.).

Lecanium fitchii Sign., Ann. Soc. Ent. Fr., (5), iii, p. 404 (1873).

" " Comst., 2nd Rep. Dep. Ent. Corn. Univ., p. 133 (1883).

" " Ckll., Ins. Life, vii, p. 29 (1894).

" " " Can. Ent., xxvii, p. 255 (1895).

" (*Eulecanium*) *fitchii* Ckll. & Parr., The Industrialist, p. 236 (1899).

Eulecanium fitchii King, Can. Ent., xxxiii, p. 333 (1901).

Lecanium " Fletcher, Rep. Can. Exp. Farms, 1901, p. 241 (1902).

Habitat.—Canada: Northeastern States; Ohio.

On raspberry; blackberry.

935. Eulecanium fletcheri (Ckll.).

Lecanium fletcheri Ckll., Can. Ent., xxv, p. 221 (1893).

" " Fletcher, " " xxvii, p. 6 (1895).

" (*Eulecanium*) *fletcheri* Ckll., Check List, p. 332 (1896).

" *fletcheri* King, Can. Ent., xxxi, p. 141 (1899).

" " Harrington, Rep. Ent. Soc. Ont., p. 96 (1899).

" " King, Psyche, viii, p. 350 (1899).

" " " Can. Ent., xxxiii, p. 194 (1901).

Eulecanium " " " " xxxiv, p. 159 (1902).

Habitat.—Can.; Mass.; N. Y.; Ohio.

On Arbor-vitæ.

936. Eulecanium fraxini King.

Eulecanium fraxini King, Can. Ent., xxxiv, p. 158 (1902).

Habitat.—Can.; Mass.

On *Fraxinus americanus*.

937. *Eulecanium fuscum* (Gmel.).

- — Reaum. (non Sign.), Mem. Ins., iv, p. 60. pl. 5, fig. 2 (1738).
 ?*Chermes quercus rotundus fuscus* Geoff., Abr. Ins., i, p. 507 (1762).
 ?*Coccus quercus fuscus* Mod., Act. Goth., p. 24 (1778).
 ?*Chermes quercus* Fourc. (non Linn.), Ent. Paris., i, p. 229 (1785).
Coccus fuscus Gmel., Syst. Nat., Ed. xiii, p. 2221 (1789).
Chermes rotundus quercus Oliv., Ency. Meth., vii, p. 440 (1792).
Coccus fuscus Turt., Syst. Nat., ii, p. 715 (1801).
 " " Bechst., Forstins., i, p. 288 (1804).
 " " " " iii, p. 891 (1805).
Lecanium fuscum Dougl., Ent. Mon. Mag., xxiv, p. 98 (1887).
 " " " " " " xxvi, p. 318 (1890).
 " " Ckll., Can. Ent., xxvii, p. 35 (1895).
Eulecanium " " The Entom., xxxiv, p. 91 (1901).
 Habitat.—Europe.
 On oak.

938. *Eulecanium genevense* (Targ.).

- Lecanium genevense* Targ., Catalogue, p. 38 (1869).
 " " Sign., Ann. Soc. Ent. Fr., (5), iii, pp. 41, 421 (1873).
 " " Dougl., Ent. Mon. Mag., xxi, p. 15 (1885).
 " " " " " " xxiii, pp. 25, 28 (1886).
 " " " " " " xxvii, p. 267 (1891).
 " " Newst., " " " " xxxi, p. 85 (1895).
 " " Dougl., " " " " xxxii, p. 182 (1896).
 " (*Eulecanium*) *genevense* Ckll., Check List, p. 332 (1896).
 " *genevense* Newst., Ind. Mus. Notes, iv, p. 82 (1897).
 " " " Journ. Roy. Hor. Soc., xxiii, p. 23 (1900).
 Habitat.—Europe.
 On hawthorn.

***Eulecanium genevense marchali* Ckll.**

- Eulecanium genevense* var. *marchali* Ckll., Psyche, x, p. 20 (1903).
 Habitat.—France.

939. *Eulecanium guignardi* King.

- Eulecanium guignardi* King, Can. Ent., xxxiii, p. 334 (1901).
 Habitat.—Ontario, Canada.
 On plum.

940. *Eulecanium juglandifex* (Fitch).

(*Butternut scale*.)

- Lecanium juglandifex* Fitch, 3rd Rep. Ins. N. Y., p. 463 (1856).
 " " Sign., Ann. Soc. Ent. Fr., (5), iii, p. 406 (1873).
 " " Pack., Shade Trees, p. 86 (1881).
 " " Comst., 2nd Rep. Dep. Ent. Corn. Univ., p. 134 (1883).
 " " Pack., 5th Rep. U. S. Ent. Com., p. 338 (1890).

Lecanium juglandifex Ckll., The Entom., xxvii, p. 332 (1894).

" " " Can. Ent., xxvii, p. 60 (1895).

" (*Eulecanium*) *juglandifex* Ckll., Check List, p. 332 (1896).

Habitat.—United States.

On butternut: plum?

Entomologists differ so much in regard to the identity of this species and numbers 941, 954 and 973 that they are here given as separate species.

941. *Eulecanium juglandis* (Bouché).

(*The N. Y. Plum scale*.)

Lecanium juglandis Bouché, Stett. Ent. Zeit., v, p. 299 (1844).

" " Sign., Ann. Soc. Ent. Fr., (5), iii, p. 406 (1873).

" " Kalt., Die Pflanz., p. 98 (1874).

" " Goethe, Jahrb. Nass. Ver. Nat., pp. 122, 129 (1884).

" " Ckll., The Entom., xxvii, p. 332 (1894).

" " " Can. Ent., xxvii, p. 60 (1895).

" " Henschel, Die Schädl. Forst. & Obst. Ins., p. 511 (1895).

" " Lint., 10th Rep. N. Y. St. Mus., p. 273 (1895).

" " Lowe & Sirrine, 14th Rep. N. Y. Exp. Sta., 1895, p. 574 (1896).

" " Lint., 11th Rep. Ins. N. Y., 1895, p. 205 (1896).

" " Slingerland, Bull. 108, Corn. Univ. Exp. Sta., p. 82 (1896).

" (*Eulecanium*) *juglandis* Ckll., Check List, p. 332 (1896).

" *juglandis* Smith, Rep. N. J. St. Bd. Agr., p. 112 (1899).

" " Frank & Kruger, Schildlausbuch, p. 109 (1900).

" " King & Reh, Jahrb. Hamb. Wiss. Anst., xviii, p. 5 (1900).

Eulecanium " " Can. Ent., xxxiii, p. 333 (1901).

Habitat.—Canada; Nova Scotia; Middle States; Germany.

On *Juglans regia*; *J. nigra*; plum.

942. *Eulecanium kansasense* (Hunter).

Lecanium kansasense Hunter, Kan. Univ. Quar., viii, p. 69 (1899).

" " King, Can. Ent., xxxiii, p. 107 (1901).

Eulecanium " " " " xxxiv, p. 60 (1901).

Habitat.—Kansas; Mass.

On *Cercis canadensis*; shad-bush.

943. *Eulecanium kingii* (Ckll.).

Lecanium (*Eulecanium*) *kingii* Ckll., Ann. Mag. N. H., (7), ii, p. 322 (1898).

" " " " & Parr., The Industrialist, p. 235 (1899).

Habitat.—Mass.

On *Vaccinium corymbosum*.

944. *Eulecanium lintneri* (Ckll. & Benn.).

Lecanium lintneri Ckll. & Benn., Am. Nat., xxix, p. 381 (1895).

" " Berl., Riv. Pat. Veg., iv, p. 380 (1896).

" (*Eulecanium*) *lintneri* Ckll., Check List, p. 333 (1896).

Habitat.—New York.

On Sassafras.

945. *Eulecanium*(?) *liriodendri* (Gmel.).

?*Coccus tulipiferae* Hill, Hamb. Mag., xii, pp. 1-24 (1753).

" *liriodendri* Gmel., Syst. Nat., Ed. xiii, p. 2220 (1789).

" " Turton, " " p. 715 (1801).

" " Sign., Ann. Soc. Ent. Fr., (5), vi, p. 620 (1876).

Lecanium " Ckll., Pr. Ac. N. Sci. Ph., p. 271 (1899).

Eulecanium " " in litt. (1902).

Habitat.—Europe.

On *Liriodendron tulipifera*.

946. *Eulecanium lymani* King.

Eulecanium lymani King, Can. Ent., xxxiii, p. 335 (1901).

Habitat.—Quebec, Canada.

On oak.

947. *Eulecanium macluratum* (Ckll.).

Lecanium (*Eulecanium*) *macluratum* Ckll., Can. Ent., xxx, p. 294 (1898).

" " " " & Parr., The Industrialist, p. 236 (1899).

Eulecanium macluratum King, Can. Ent., xxxiii, p. 335 (1901).

Habitat.—Ontario, Canada.

On osage orange.

948. *Eulecanium magnoliarum* (Ckll.).

Lecanium magnoliarum Ckll., Ent. News, ix, p. 145 (1898).

" (*Eulecanium*) *magnoliarum* Ckll. & Parr., The Industrialist, p. 236 (1899).

" *magnoliarum* Butz, Rep. Pa. St. Coll., 1900-01, p. 344 (1902).

" " Thro, Bull. 209, Corn. Univ. Exp. Sta., p. 217 (1903).

Habitat.—California: Ohio.

On *Magnolia*: *Daphne*; *Virginia creeper*.

***Eulecanium magnoliarum hortensiae* Ckll.**

Eulecanium magnoliarum var. *hortensiae* Ckll., Psyche, x, p. 19 (1903).

Habitat.—France.

On "*Hortensia*" (*Hydrangea*).

949. *Eulecanium mori* (Sign.).

Lecanium mori Sign., Ann. Soc. Ent. Fr., (5), iii, p. 407 (1873).

" " Mask., N. Z. Trans., xvii, p. 29 (1884).

" " " Ins. Nox. Agr. N. Z., p. 82 (1887).

" " " N. Z. Trans., xxvi, p. 75 (1893).

" " " " xxviii, p. 392 (1896).

" (*Eulecanium*) *mori* Ckll., Check List, p. 332 (1896).

Coccus mori Kirkaldy, Fauna Haw., iii, pt. 2, p. 106 (1902).

Habitat.—France; New Zealand; Hawaiian Islands.

On *Morus* (mulberry); *Alsophila colensoi*; *Nephrolepis cordifolia*; *Asplenium flaccidum*; *Ulex europæus*; *Spartium*.

950. Eulecanium nigrofasciatum (Perg.).*(Terrapin Scale.)*

- Lecanium nigrofasciatum Perg., Bull. 18, n. s., Dep. Ag., p. 26 (1898).
 " " Chambliss, Bull. 4, Tenn. Exp. Sta., p. 149 (1898).
 " " Johnson, Bull. 20, n. s., Dep. Ag., p. 66 (1899).
 " " Marlatt, " " " " " p. 75 (1899).
 " (Eulecanium) nigrofasciatum Ckll. & Parr., The Industrialist, p. 234 (1899).
 " nigrofasciatum Johnson, Can. Ent., xxxi, p. 87 (1899).
 " " King, " " " " p. 141 (1899).
 " " Lugger, 6th Rep. Minn. Exp. Sta., p. 218 (1900).
 " " Quaint. & Scott, Cocc. Amer., Dec. iii-iv, No. 8 (1901).
 " " Banks, Bull. 34, n. s., Dep. Ag., p. 11 (1902).
 " " Pettit, " 200, Mich. Exp. Sta., p. 187 (1902).
 Eulecanium " King, Can. Ent., xxxiv, p. 160 (1902).
 Lecanium " Thro, Bull. 209, Corn. Univ. Exp. Sta., p. 211 (1903).
 Habitat.—Can.; Mass.; N. Y.; N. J.; Pa.; Del.; Md.; D. C.; Fla.; Ohio; Tenn.; Ill.; Mo.; Minn.
 On plum; peach; apple; olive; sycamore; maple; linden; birch; Vaccinium.

951. Eulecanium obtusum (Thro).

- Lecanium obtusum Thro, Bull. 209, Corn. Univ. Exp. Sta., p. 212 (1903).
 Eulecanium " Ckll., in litt. (1903).
 Habitat.—New York.
 On blackberry (*Rubus villosus*).

952. Eulecanium pallidior (Ckll. & King).

- Lecanium pallidior Ckll. & King, Psyche, viii, p. 350 (1899).
 Eulecanium " " in litt. (1902).
 Habitat.—Mass.
 On white cedar.

953. Eulecanium perornatum (Ckll. & Parr.).

- Lecanium (Eulecanium) perornatum Ckll. & Parr., The Industrialist, p. 236 (1899).
 Habitat.—Austria.
 On *Rosa canina*.

954. Eulecanium persicæ (Fab.).*(Peach scale.)*

- — Reaum., Mem. Ins., iv, p. i, pl. i, figs. 1, 2 (1738).
 Chermes persicæ oblongus Geoff., Abr. Ins., i, p. 506 (1762).
 Coccus " Fab., Gen. Ins., p. 304 (1776).
 " persicorum Sulzer, Gesch. Ins., p. 112 (1776).
 " costatus Schr., Enum. Ins. Austr., p. 589, pl. 10, fig. 11 (1781).
 Chermes persicæ Fourc., Ent. Paris., p. 228 (1785).

- Coccus persicorum* Ramer, Gener., pl. 11, fig. 9 (1789).
Chermes persicae Oliv., Ency. Meth., vii, p. 439 (1892).
Coccus " Fab., Ent. Syst., iv, p. 222 (1794).
 " " " " " Suppl., p. 546 (1799).
 " " Schr., Faun. Boica, ii, pt. 1, p. 144 (1801).
 " " Fab., Syst. Rhyng., p. 307 (1803).
 " " Latr., Gen. Crust. et Ins., p. 175 (1807).
 " " Bouché, Schäd. Gart. Ins., p. 51 (1833).
 " " Fonsc., Ann. Soc. Ent. Fr., iii, p. 207 (1834).
 " " Burm., Handb. Ent., ii, p. 71 (1835).
 " " Lam., Hist. Nat. Anim., iv, p. 115 (1835).
 " " Blanch., Hist. Nat. Ins., iii, p. 214 (1840).
Lecanium " Bouché, Stett. Ent. Zeit., v, p. 296 (1844).
 " rosarum Snell. v. Voll., Tijdschr. voor Entom., v, p. 94 (1862).
Coccus persicae Targ., Studii sul. Cocc., pp. 47, 68 (1867).
Lecanium " " Catalogue, p. 37 (1869).
 " cymbiformis Targ., " p. 37 (1869).
 " persicochilense " " p. 38 (1869).
 " persicae Sign., Ann. Soc. Ent. Fr., (5), iii, p. 407 (1873).
 " rosarum " " " " " p. 427 (1873).
Coccus persicae Kalt., Die Pflanz., p. 534 (1874).
Lecanium " Lint., Coun. Gent., pp. 679, 711 (1879).
 " " Comst., 2nd Rep. Dep. Ent. Corn. Univ., p. 134 (1883).
 " " Saund., Ins. Inj. to Fruits, p. 195 (1883).
 " " Goethe, Jahrb. Nass. Ver. Nat., p. 144 (1884).
 " cymbiformis Targ., Annali di Agr., p. 56 (1884).
 " persicae Riley, Ins. Life, i, p. 144 (1888).
 " rosarum Mask., N. Z. Trans., xxiv, p. 22 (1891).
 " saroathamni Dougl., Ent. Mon. Mag., xxvii, p. 65 (1891).
 " persicae Riley & How., Ins. Life, iv, p. 410 (1892).
 " " Howard, Yearbook U. S. Dep. Ag., p. 270 (1894).
 " " Ckll., The Entom., xxvii, p. 334 (1894).
 " " Hopkins, Rep. W. Va. Exp. Sta., p. 583 (1894).
 " " Beckwith, 7th Rep. Del. Exp. Sta., p. 168 (1895).
 " " Henschel, Die Schäd. Forst. & Obst. Ins., p. 511 (1895).
 " " Gillette, Bull. 38, Col. Exp. Sta., p. 37 (1897).
 " " Starnes, " 36, Ga. " " " p. 28 (1897).
 " " Laem., Die Obstbaumschadlinge, Dresden, p. 32 (1898).
 " " Berl. e Leon., Cherm. Ital., Fasc. iii. No. 65 (1898).
 " " Newst., Jn. Roy. Hor. Soc., xxiii, p. 21 (1900).
 " " Bruner, Rep. Neb. St. Hor. Soc., p. 80 (1900).
 " (Eulecanium) rosarum King & Reh, Jahrb. Hamb. Wiss. Anst., xviii, p. 6 (1900).
 " persicae Frank & Kruger, Schildlausbuch, p. 107 (1900).
Eulecanium " Ckll., The Entom., xxxiv, p. 92 (1901).
 " " Hofer, Mitth. Schw. Ent. Ges., (10), x, p. 476 (1902).

Habitat.—Europe; Australia; United States; Nova Scotia.

On peach; *Magnolia glauca*; *Ilex opaca*; *Vitis vinifera*; *Elæagnus angustifolia*; *Morus*; nectarine; plum; Japanese quince; gooseberry; rose.

955. *Eulecanium pruinorum* (Coq.).

(*Frosted scale*.)

Eulecanium pruinorum Coq., Ins. Life, iii, pp. 382, 383 (1891).

“ “ Craw, Rep. Cal. Bd. Hort., p. 13 (1891).

“ “ Coq., Bull. 26, Div. Ent. Dep. Ag., p. 33 (1892).

“ “ Craw, Rep. Cal. Bd. Hort., pp. 256, 267 (1894).

“ “ Ckll., Can. Ent., xxvii, p. 255, note (1895).

“ (*Eulecanium*) *pruinorum* Ckll., Check List, p. 333 (1896).

Eulecanium pruinorum King, Can. Ent., xxxiv, p. 60 (1902).

Habitat.—Can.; Mass.; N. Y.; Ariz.; Cal.

On apricot; prune; peach; plum; cherry; pear; apple; English walnut; laurel; ash; birch; cork-elm; grape-vine; rose; orange.

956. *Eulecanium prunastri* (Fonsc.).

(*Plum Lecanium*.)

— — Reaum., Mem. Ins., iv, pl. 2, figs. 4, 5 (1738).

? *Chermes persicæ rotundus* Geoff., Abr. Ins., i, p. 506 (1762).

? “ *amygdali* Fourc., Ent. Paris., p. 228 (1785).

|| *Coccus persicæ* Gmel., Syst. Nat., Ed. xiii, p. 2220 (1789).

Chermes “ *rotundus* Oliv., Ency. Meth., vii, p. 439 (1792).

Coccus “ Turton, Syst. Nat., p. 715 (1801).

“ *prunastri* Fonsc., Ann. Soc. Ent. Fr., iii, p. 211 (1834).

Lecanium blanchardii Targ., Catalogue, p. 38 (1869).

“ *prunastri* Sign., Ann. Soc. Ent. Fr., (5), iii, p. 423 (1873).

“ *rotundum* “ “ “ “ “ “ p. 428 (1873).

“ “ Goethe, Jahrb. Nass. Ver. Nat., p. 124 (1884).

“ *prunastri* Dougl., Ent. Mon. Mag., xxii, pp. 14, 158 (1885).

“ “ Howard, Yearbook U. S. Dep. Ag., p. 272 (1894).

“ “ Henschel, Schäd. Forst. & Obst. Ins., p. 511 (1895).

“ *rotundum* Ckll., Can. Ent., xxvii, p. 60 (1895).

“ (*Eulecanium*) *rotundum* Ckll., Check List, p. 332 (1896).

“ *prunastri* Starnes, Bull. 36, Ga. Exp. Sta., p. 28 (1897).

“ *rotundum* Frank & Kruger, Schildlausbuch, p. 108 (1900).

“ *prunastri* Ckll., The Entom., xxxiv, p. 92 (1901).

“ “ Banks, Bull. 34, n. s., Dep. Ag., p. 12 (1902).

Habitat.—Europe; Japan?; New York; Ohio.

On plum; peach.

***Eulecanium prunastri* var. a. Ckll.**

Eulecanium prunastri var. a. Ckll., Psyche, x, p. 21 (1903).

Habitat.—France.

On peach.

957. Eulecanium pubescens (Ehrh.).

Lecanium pubescens Ehrh., Can. Ent., xxx, p. 244 (1898).

" (Eulecanium) *pubescens* Ckll. & Parr., The Industrialist, p. 237 (1899).

Habitat.—California.

On oak.

958. Eulecanium pyri (Schr.).

Coccus pyri Schr., Enum. Ins. Austr., pp. 295, 587 (1781).

" " " Faun. Boica, ii, pt. i, p. 145 (1801).

Lecanium " Fitch, 1st Rep. Ins. N. Y., p. 809 (1854).

" " " 3rd " " " p. 352 (1856).

" " Uhler, Rep. U. S. Dep. Ag., p. 313 (1860).

" " Walsh & Riley, Am. Ent., i, p. 14 (1868).

Pulvinaria pyri Sign., Ann. Soc. Ent. Fr., (5), iii, p. 41 (1873).

Lecanium " " " " " " " p. 424 (1873).

" " Putn., Pr. Dav. Ac. N. Sci., p. 339 (1879).

Pulvinaria " Comst., 2nd Rep. Dep. Ent. Corn. Univ., p. 137 (1883).

" " Goethe, Jahrb. Nass. Ver. Nat., p. 123 (1884).

Lecanium " Editor, Amer. Garden, viii, p. 284 (1887).

" " Dougl., Ent. Mon. Mag., xxvii, p. 96 (1891).

" " Ckll., Can. Ent., xxvi, p. 35 (1894).

" " Henschel, Die Schäd. Forst. & Obst. Ins., p. 511 (1895).

" (Eulecanium) *pyri* Ckll., Check List, p. 332 (1896).

" *pyri* Frank & Kruger, Schildlausbuch, p. 109 (1900).

Eulecanium " King, Can. Ent., xxxiv, p. 60 (1902).

Habitat.—Europe; United States; Prince Edward's Island.

On pear; apple; hickory; white thorn.

959. Eulecanium quercifex (Fitch).

Lecanium quercifex Fitch, 5th Rep. Ins. N. Y., p. 805 (1858).

" " Sign., Ann. Soc. Ent. Fr., (5), iii, p. 425 (1873).

" " Pack., Shade Trees, p. 38 (1881).

" " Comst., 2nd Rep. Dep. Ent. Corn. Univ., p. 135 (1883).

" " Pack., 5th Rep. U. S. Ent. Com., p. 98 (1890).

" " Ckll., Can. Ent., xxvii, p. 35 (1895).

" " King, " " xxxi, p. 140 (1899).

" (Eulecanium) *quercifex* Ckll. & Parr., The Industrialist, p. 235 (1899).

Eulecanium quercifex King, Can. Ent., xxxiii, p. 31 (1901).

Lecanium " Thro, Bull. 209, Corn. Univ. Exp. Sta., p. 213 (1903).

Habitat.—Can.; N. Y.; Mass.; Ohio.

On oak.

960. Eulecanium quercitronis (Fitch).

- Lecanium quercitronis Fitch, 5th Rep. Ins. N. Y., p. 805 (1858).
 " " Sign., Ann. Soc. Ent. Fr., (5), iii, p. 426 (1873).
 " " Pack., Shade Trees, p. 38 (1881).
 " " Comst., 2nd Rep. Dep. Ent. Corn. Univ., p. 135 (1883).
 " " Pack., 5th Rep. U. S. Ent. Com., p. 98 (1890).
 " " Ckll., Can. Ent., xxvii, pp. 35, 255 (1895).
 " (Eulecanium) quercitronis Ckll. & Parr., The Industrialist, p. 232 (1899).
 " quercitronis Parr., Jn. N. Y. Ent. Soc., vii, p. 257 (1899).
 Eulecanium " King, Can. Ent., xxxiii, p. 315 (1901).
 Habitat.—Can.; Mass.; N. Y.; Ill.; Ariz.; N. Mex.
 On black oak; ironwood; Xanthoxylum americanum; Castanea pumila; elm.

Eulecanium quercitronis kermoides (Tyr.).

- Lecanium quercitronis var. kermoides Tyr., Rep. Cal. Exp. Sta., 1894, pp. 256, 269 (1896).
 Habitat.—California.
 On oak; orange; locust.

961. Eulecanium rehi (King).

- Lecanium rehi King, Jahrb. Hamb. Wiss. Anst., xviii, p. 5 (1900).
 " " Hofer, Mitth. Schw. Ent. Ges., (10), x, p. 477 (1903).
 Eulecanium " " " " " " " " p. 481 (1903).
 Habitat.—Europe.
 On Ribes nigrum; R. rubrum; R. aureum; gooseberry; Symphoricarpos racemosus.

962. Eulecanium ribis (Fitch).*(Currant scale.)*

- Lecanium ribis Fitch, 3rd Rep. Ins. N. Y., p. 427 (1856).
 " " Sign., Ann. Soc. Ent. Fr., (5), vi, p. 624 (1876).
 " " Dougl., Ent. Mon. Mag., xix, p. 88 (1882).
 " " Comst., 2nd Rep. Dep. Ent. Corn. Univ., p. 135 (1883).
 " " Dougl., Ent. Mon. Mag., xxiii, p. 29 (1886).
 " " Fletcher, Rep. Can. Exp. Farms, p. 32 (1887).
 " " Mask., N. Z. Trans., xxiii, p. 16 (1890).
 " " " " " " " " xxiv, p. 22 (1891).
 " (Eulecanium) ribis Ckll. & Parr., The Industrialist, p. 234 (1899).
 " ribis Lugger, 6th Rep. Minn. Exp. Sta., p. 218 (1900).
 Habitat.—Can.; N. Y.; Ohio; Minn.; England; Germany?; New Zealand; W. Australia?
 On currant; gooseberry; mulberry; Carpinus; Ostrya.

963. *Eulecanium robiniae* (Towns.).

- Lecanium robiniae Towns., Bull. 7, N. Mex. Exp. Sta., p. 11 (1892).
 " " Riley & How., Ins. Life, v, p. 65 (1892).
 " robiniarum Ckll. (non Dougl.), Can. Ent., xxvii, p. 257 (1895).
 " " " Science Gossip, May, p. 367 (1900).
 Eulecanium " " The Entom., xxxv, p. 178 (1902).
 Habitat.—New Mexico; Arizona.
 On Robinia pseudacacia; osage orange.

Eulecanium robiniae subsimile Ckll.

- Eulecanium robiniae* var. *subsimile* Ckll., The Entom., xxxv, p. 178 (1902).
Habitat.—Mexico.
On ash? Rhus?

964. *Eulecanium robiniarum* (Dougl.).

- Lecanium robiniarum* Dougl., Ent. Mon. Mag., xxvi, p. 318 (1890).
 “ “ “ “ “ xxix, p. 167 (1893).
 “ “ Eckst., Forst. Zool., p. 557 (1897).
 “ “ Henry, “ Sur quelques Cochenilles forestières ” (1898).
 “ “ “ Feuille Jeune Nat., (3), xxviii, p. 138 (1898).
 “ “ Kiefer, Bull. Soc. Ent. Fr., lxxviii, p. 158 (1899).
Eulecanium “ Ckll., The Entom., xxxv, p. 178 (1902).
 Habitat.—Europe: New Mexico.
 On *Robinia pseudacacia*.

965. *Eulecanium rosæ* King.

- Eulecanium rosæ* King, Can. Ent., xxxiii, p. 336 (1901).
Habitat.—Quebec, Canada.
On rose.

966. *Eulecanium rubi* (Schr.).

- Coccus rubi Schr., Faun. Boica, ii, pt. i, p. 144 (1801).
 " " Sign., Ann. Soc. Ent. Fr., (5), vi, p. 624 (1876).
 " " Licht., Bull. " " " (6), i, p. cxvi (1881).
 " " " " " " " ii, p. lxxv (1882).
 " " " Wien. Ent. Zeit., i, p. 124 (1882).
 Lecanium rubi Dougl., Ent. Mon. Mag., xxviii, p. 105 (1892).
 Coccus " " " " " xxx, p. 17 (1894).
 Lecanium " " " " " " p. 136 (1894).
 " " Kll., Ins. Life, vii, pp. 29, 30, 31 (1894).
 " (Eulecanium) rubi Kll., Check List, p. 332 (1896).
 " rubi King & Reh, Jahrb. Hamb. Wiss. Anst., xviii, p. 6 (1900).
 Habitat.—Europe.
 On Rubus.

967. *Eulecanium rugosum* (Sign.).

- Lecanium rugosum* Sign., Ann. Soc. Ent. Fr., (5), iii, p. 429 (1873).
 " " Slingerland, Bull. 83, Dep. Ent. Corn.Univ., p.685 (1894).

Lecanium rugosum Ckll., Can. Ent., xxvii, p. 59 (1895).

" (*Eulecanium*) *rugosum* Ckll., Check List, p. 332 (1896).

" *rugosum* Frank & Kruger, Schildlausbuch, p. 108 (1900).

Habitat.—France; Germany; United States.

On peach; plum; quince; apple; pear; cherry; honey locust; elm; maple.

It is very doubtful whether all the above citations refer to the same species.

968. *Eulecanium subaustrale* (Ckll.).

Lecanium subaustrale Ckll., The Entom., xxxi, p. 131 (1898).

" (*Eulecanium*) *subaustrale* Ckll., Check List, Suppl., p. 394 (1899).

Habitat.—Mexico.

On *Celtis occidentalis*?

969. *Eulecanium takachihoi* (Kuwana).

Lecanium (*Eulecanium*) *takachihoi* Kuw., Pr. Cal. Ac. Sci., (3), iii, p. 63 (1902).

Habitat.—Japan.

On chestnut.

970. *Eulecanium tarsale* (Sign.).

Lecanium tarsalis Sign., Ann. Soc. Ent. Fr., (5), iii, p. 430 (1873).

" (*Eulecanium*) *tarsale* Ckll. & Parr., The Industrialist, p. 234 (1899).

" *tarsale* King, Can. Ent., xxxi, p. 141 (1899).

Habitat.—N. Y.; Mass.

On *Cornus sanguinea*; *C. alternifolia*.

971. *Eulecanium tiliae* (Linn.).

Coccus tiliae Linn., Syst. Nat., Ed. x, i, p. 456 (1758).

" " " Faun. Suec., ii, p. 265 (1761).

Chermes " *hemisphaericus* Geoff., Abr. Ins., i, p. 507 (1762).

Coccus " Linn., Syst. Nat., Ed. xii, i, p. 741 (1766).

" " Fab., Syst. Ent., p. 743 (1775).

" " Mod., Act. Goth., p. 30 (1778).

" " Fab., Spec. Ins., ii, p. 394 (1781).

Chermes " Fourc., Ent. Paris., p. 229 (1785).

Coccus " Fab., Mant. Ins., ii, p. 319 (1787).

" " Gmel., Syst. Nat., Ed. xiii, p. 2217 (1789).

Chermes " Oliv., Ency. Meth., vii, p. 440 (1792).

Coccus " Fab., Ent. Syst., iv, p. 226 (1794).

" " Turton, Syst. Nat., p. 713 (1801).

" " Fab., Syst. Rhyng., p. 309 (1803).

" " Bechst., Forstins., i, p. 286 (1804).

Lecanium tiliae Blanch., Hist. Nat. Ins., iii, p. 214 (1840).

" " Sign., Ann. Soc. Ent. Fr., (5), iii, p. 431 (1873).

Coccus " Dougl., Ent. Mon. Mag., xxiii, p. 25 (1886).

Eulecanium tiliae Ckll., The Entom., xxxiv, p. 92 (1901).

Habitat.—Europe.

On *Citrus*; poplar; elm; maple; plum; pear; cherry.

972. *Eulecanium tulipiferae* (Cook).

|| *Lecanium tiliae* Fitch (non Linn.), 4th Rep. Regents Univ. N. Y., p. 69 (1851).

" *tulipiferae* Cook, Can. Ent., x, p. 192 (1878).

" " Comst., 2nd Rep. Dep. Ent. Conn. Univ., p. 136 (1883).

" *tiliae* Cook, Ent. Am., i, p. 211 (1885).

" *tulipiferae* Riley & How., Ins. Life, iii, p. 28 (1890).

" *tiliae* Sturgis, Rep. Conn. Exp. Sta., p. 193 (1895).

" " Smith, Rep. N. J. Exp. Sta., 1897, p. 403 (1898).

" " Johns., Rep. Md. Exp. Sta., p. 273 (1898).

" *tulipiferae* Felt, 14th Rep. Ins. N. Y., p. 213 (1898).

Eulecanium " King, Can. Ent., xxxiv, p. 60 (1902).

Habitat.—Mass.; Conn.; N. Y.; N. J.; Tenn.; W. States.

On linden; tulip-tree; *Magnolia Soulangiana*; clover.

973. *Eulecanium variegatum* (Goethe).

Lecanium variegatum Goethe, Jahrb. Nass. Ver. Nat., p. 37 (1884).

" " Dougl., Ent. Mon. Mag., xxiii, p. 28 (1886).

" " " " " " xxvii, p. 96 (1891).

" " Ckll., The Entom., xxvii, p. 335 (1894).

" (*Eulecanium*) *variegatum* Ckll. & Parr., The Industrialist, p. 235 (1899).

Lecanium variegatum Frank & Kruger, Schildlausbuch, p. 110 (1900).

Habitat.—Europe.

On plum; apple.

974. *Eulecanium vini* (Bouché).

Lecanium vini Bouché, Stett. Ent. Zeit., xii, p. 112 (1851).

" (*Eulecanium*) *vini* King & Reh, Jahrb. Hamb. Wiss. Anst., xviii, p. 6 (1900).

Eulecanium vini Ckll., The Entom., xxxiv, p. 92 (1901).

" " Hofer, Mitth. Schw. Ent. Ges., (10), x, p. 476 (1902).

Habitat.—Europe.

On grape vine; *Lonicera*; *Pyrus malus*; *P. communis*; *Spiraea*; *Prunus persica*; *P. armeniaca*; *Robinia pseudacacia*.

975. *Eulecanium websteri* (King).

|| *Lecanium ribis* Ckll. (non Fitch), Can. Ent., xxvii, p. 255 (1895).

" (*Eulecanium*) *ribis* Ckll. & Parr., The Industrialist, p. 234 (1899).

" *websteri* King, Can. Ent., xxxiii, p. 106 (1901).

Eulecanium " " " " xxxiv, p. 60 (1902).

Habitat.—Can.: Nova Scotia; Mass.; Ohio; Iowa; Kansas.

On currant; white birch; *Spiraea*; *Vaccinium*; mulberry; *Ostrya*; *Carpinus*; *Celtis occidentalis*.

***Eulecanium websteri mirabile* (King).**

Lecanium websteri var. *mirabilis* King, Mitth. Schw. Ent. Ges., (10), x, p. 482 (1902).

Habitat.—Switzerland.

On *Acer negundo*.

Genus **PARALECANIUM** Ckll. Type, frenchii.

s. g. *Paralecanium* Ckll. & Parr., The Industrialist, p. 227 (1899): Ckll., Can. Ent., xxxiii, p. 57 (1901); g. Ann. Mag. N. H., (7), ix, p. 455 (1902).

976. *Paralecanium expansum* (Green).

Lecanium expansum Green, Ind. Mus. Notes, iv, p. 9 (1896).

" (*Paralecanium*) *expansum* Ckll. & Parr., The Industrialist, p. 227 (1899).

Habitat.—Ceylon.

On Litsea; Dalbergia.

977. *Paralecanium frenchii* (Mask.).

Lecanium frenchii Mask., N. Z. Trans., xxiii, p. 17 (1890).

" (*Paralecanium*) *frenchii* Ckll. & Parr., The Industrialist, p. 227 (1899).

Habitat.—Australia.

On Banksia australis.

***Paralecanium frenchii macrozamiæ* (Full.).**

Lecanium frenchii var. *macrozamiæ* Full., Notes on Cocc. W. Austr., p. 6 (1897).

" (*Paralecanium*) *frenchii* var. *macrozamiæ* Ckll. & Parr., The Industrialist, p. 227 (1899).

" *frenchii* var. *macrozamiæ* Full., Tr. Ent. Soc. Lond., p. 459 (1899).

Habitat.—W. Australia.

On *Macrozamia fraseri*.

978. *Paralecanium geometricum* (Green).

Lecanium geometricum Green, Ind. Mus. Notes, iv, p. 9 (1896).

" (*Paralecanium*) *geometricum* Ckll. & Parr., The Industrialist, p. 227 (1899).

Habitat.—Ceylon; China.

On *Laurus canariensis*.

979. *Paralecanium marginatum* (Green).

Lecanium marginatum Green, Ind. Mus. Notes, iv, p. 9 (1896).

" (*Paralecanium*) *marginatum* Ckll. & Parr., The Industrialist, p. 227 (1899).

Habitat.—Ceylon.

On *Psychotria Thwaitesii*.

980. *Paralecanium marianum* Ckll.

Paralecanium marianum Ckll., Ann. Mag. N. H., (7), ix, p. 455 (1902).

Habitat.—Rio Janeiro.

981. *Paralecanium maritimum* (Green).

Lecanium planum var. *maritimum* Green, Ind. Mus. Notes, iv, p. 9 (1896).

" (*Paralecanium*) " Ckll. & Parr., The Industrialist, p. 228 (1899).

Habitat.—Ceylon.

982. *Paralecanium planum* (Green).

Lecanium planum Green, Ind. Mus. Notes, iv, p. 9 (1896).

" (*Paralecanium*) *planum* Ckll. & Parr., The Industrialist, p. 228 (1899).

Habitat.—Ceylon.

Genus **SAISSETIA** Deplanches. Type, *coffeæ*=hemisphæricum.

Saissetia Deplanches, Fauvel, Bull. Soc. Linn. Norm., ix, p. 127 (1865):

Ckll., Can. Ent., xxxiii, p. 58 (1901).

Bernardia Ashm., Tr. Am. Ent. Soc., xviii, p. 100 (1891).

983. *Saissetia anthurii* (Bdv.).

Chermes anthurii Bdv., Ent. Hort., p. 328 (1867).

Lecanium " Sign., Ann. Soc. Ent. Fr., (4), viii, p. 843 (1868).

" " " " " " " (5), iii, p. 435 (1873).

" " Mask., N. Z. Trans., xxv, p. 219 (1892).

" " Ckll. & Parr., The Industrialist, p. 164, note (1899).

" (*Saissetia*) *anthurii* King, Can. Ent., xxxi, p. 142 (1899).

Saissetia anthurii Ckll., in litt. (1902).

Habitat.—Europe; Australia; Mass. (in hothouses).

On *Anthurium*; *Asparagus*; orchids; grass.

984. *Saissetia beaumontiæ* (Dougl.).

Lecanium beaumontiæ Dougl., Ent. Mon. Mag., xxiv, p. 95 (1887).

" (*Saissetia*) *beaumontiæ* Ckll. & Parr., The Industrialist, p. 163 (1899).

Saissetia beaumontiæ Ckll., The Ent. Student, ii, p. 32 (1901).

Habitat.—Europe.

On *Beaumontia grandiflora*.

985. *Saissetia begoniæ* (Dougl.).

Lecanium begoniæ Dougl., Ent. Mon. Mag., xxviii, p. 209 (1892).

" " Mask., N. Z. Trans., xxvi, p. 73 (1893).

" " Ckll., Tr. Am. Ent. Soc., xx, p. 52 (1893).

" " Mask., The Entom., xxvii, p. 166 (1894).

" " Ckll., Bull. Bot. Dep. Jam., p. 70 (1894).

" " Green, Ent. Mon. Mag., xxxiii, p. 70 (1897).

" (*Saissetia*) *nigrum* var. *begoniæ* Ckll. & Parr., The Industrialist, p. 163 (1899).

Habitat.—Demerara; Antigua.

On *Begonia*; *Terminalia Catappa*.

986. *Saissetia cassiniae* (Mask.).

Lecanium cassiniae Mask., N. Z. Trans., xxiii, p. 15 (1890).

" (*Saissetia*) *cassiniae* Ckll. & Parr., The Industrialist, p. 163 (1899).

Habitat.—New Zealand.

On *Cassinia leptophylla*.

987. *Saissetia depressa* (Targ.).

- Lecanium depressum* Targ., Studii sul. Cocc., p. 29 (1867).
 “ “ “ Catalogue, p. 37 (1869).
 “ “ Sign., Ann. Soc. Ent. Fr., (5), iii, p. 439 (1873).
 “ “ Mark, Anat. Cocc., pp. 26, 47 (1876).
 “ “ Mask., N. Z. Trans., xi, p. 206 (1878).
 “ “ Dougl., Ent. Mon. Mag., xxiv, p. 27 (1887).
 “ “ Mask., Ins. Nox. Ag. N. Z., p. 79 (1887).
 “ “ “ N. Z. Trans., xxv, p. 220 (1892).
 “ “ “ “ “ xxvi, p. 73 (1893).
 “ “ Ckll., Tr. Am. Ent. Soc., xx, p. 55 (1893).
 “ “ Mask., The Entom., xxvii, p. 166 (1894).
 “ “ Ckll., Bull. Bot. Dep. Jam., p. 70 (1894).
 “ “ Craw, 4th Bien. Rep. Cal. Bd. Hort., p. 92 (1894).
 “ “ “ Bull. 68, Cal. Bd. Hort., p. 14 (1894).
 “ “ Green, Ent. Mon. Mag., xxxi, p. 232 (1895).
 “ *nigrum* ? var. *depressum* Ckll., Check List, p. 332 (1896).
 “ “ “ “ “ & Parr., The Industrialist, p. 163 (1899).
 “ “ “ “ “ Hemp., Rev. Mus. Paul., iv, p. 425 (1900).

Saissetia depressa King, Psyche, ix, p. 296 (1902).

Habitat.—New Zealand; Australia; Hawaiian Islands; Brazil; West Indies; France and Italy, (in greenhouses).

On *Ficus*; *Hibiscus*; *Hakea*; *Psidium*; *Bambusa*; various hothouse plants.

***Saissetia depressa simulans* (Dougl.).**

Lecanium depressum var. *simulans* Dougl., Ent. Mon. Mag., xxiv, p. 28 (1887).

Habitat.—Great Britain.

On *Ficus elastica*; *Camellia*.

988. *Saissetia discoides* (Hemp.).

Lecanium discoides Hemp., Rev. Mus. Paul., iv, p. 433 (1900).

“ “ “ Ann. Mag. N. H., (7), vii, p. 213 (1901).

Saissetia “ Ckll., “ “ “ “ ix, p. 453 (1902).

Habitat.—Brazil.

On “*Psidium* and other Myrtaceous plants.”

989. *Saissetia dura* (Hemp.).

Lecanium durum Hemp., Rev. Mus. Paul., iv, p. 427 (1900).

“ “ “ Ann. Mag. N. H., (7), vii, p. 210 (1901).

Saissetia dura Ckll., “ “ “ “ ix, p. 453 (1902).

Habitat.—Brazil.

On *Baccharis dracunculifolia*.

990. *Saissetia filicum* (Bdv.).

Chermes filicum Bdv., Ent. Hort., p. 335 (1867).

- Lecanium filicum Pack., 17th Rep. Mass. Bd. Ag., p. 260 (1869-70).
 “ “ Sign., Ann. Soc. Ent. Fr., (5), iii, p. 436 (1873).
 “ “ Comst., 2nd Rep. Dep. Ent. Corn. Univ., p. 133 (1883).
 Chermes “ Mask., N. Z. Trans., xvii, p. 29 (1884).
 Lecanium “ Dougl., Ent. Mon. Mag., xxiv, p. 28 (1887).
 “ “ Mask., N. Z. Trans., xxv, p. 220 (1892).
 “ “ Ckll., Tr. Am. Ent. Soc., xx, p. 55 (1893).
 “ “ “ Bull. Bot. Dep. Jam., p. 72 (1894).
 “ “ Craw., 4th Bien. Rep. Cal. Bd. Hort., p. 147 (1894).
 “ hemisphæricum var. filicum Green, Ent. Mon. Mag., xxxiii, pp. 70, 77 (1897).
 “ “ “ “ de Charm., Pr. Soc. Amic. Scien., p. 40 (1899).
 Saissetia filicum King, Psyche, ix, p. 298 (1902).
 Lecanium “ Thro., Bull. 209, Corn. Univ. Exp. Sta., p. 215 (1903).
 Habitat.—Europe; Australia; New Zealand; Mauritius; Jamaica; United States.
 On ferns.

991. *Saissetia formicarii* (Green).

- Lecanium formicarii Green, Ind. Mus. Notes, iv, p. 10 (1896).
 “ (Saissetia) formicarii Ckll. & Parr., The Industrialist, p. 164 (1899).
 Saissetia formicarii Ckll., The Ent. Student, ii, p. 32 (1901).
 Habitat.—Ceylon.
 On tea-plant; in nests of Cremastogaster.

992. *Saissetia glanulosa* (Hemp.).

- Lecanium glanulosum Hemp., Rev. Mus. Paul., iv, p. 428 (1900).
 “ “ “ Ann. Mag. N. H., (7), vii, p. 210 (1901).
 Saissetia glanulosa Ckll., “ “ “ “ ix, p. 453 (1902).
 Habitat.—Brazil.
 On Myrtaceæ.

993. *Saissetia hemisphærica* (Targ.).

(*Hemispherical scale*.)

- Lecanium hemisphæricum Targ., Studii sul. Cocc., pp. 26, 27, 30, 39, 63 (1867).
 “ “ “ Catalogue, p. 38 (1869).
 “ coffeæ Sign. (non Walk.), Ann. Soc. Ent. Fr., (5), iii, p. 435 (1873).
 “ hemisphæricum Sign., “ “ “ “ “ “ p. 436 (1873).
 “ “ Comst., Rep. U. S. Dep. Ag., 1880, p. 334 (1881).
 “ “ “ 2nd Rep. Dep. Ent. Corn. Univ., p. 134 (1883).
 “ “ Saund., Ins. Inj. to Fruits, p. 409 (1883).
 “ “ Mask., N. Z. Trans., xvii, p. 29 (1884).
 “ “ Dougl., Ent. Mon. Mag., xxiii, p. 78 (1886).
 “ “ Mask., Ins. Nox. Agr. N. Z., p. 80 (1887).
 “ “ Penzig, Annali di Agr., p. 529 (1887).

- Lecanium hemisphaericum* Comst., Intr. Ent., p. 141 (1888).
 “ “ Riley, Ins. Life, i, p. 144 (1888).
 “ *coffeæ* Cotes, Ind. Mus. Notes, i, pp. 117, 122 (1889).
 “ *hemisphaericum* Coq., Bull. 26, Div. Ent. Dep. Ag., p. 27 (1892).
 “ “ Ckll., Tr. Am. Ent. Soc., xx, p. 55 (1893).
 “ *coffeæ* Cotes, Ind. Mus. Notes, ii, p. 163 (1893).
 “ *hemisphaericum* Mask., N. Z. Trans., xxvii, p. 59 (1894).
 “ “ Craw, Rep. Cal. Exp. Sta., pp. 256, 266 (1894).
 “ “ Ckll., Bull. Bot. Dep. Jam., p. 70 (1894).
 “ *coffeæ* “ “ “ “ “ p. 71 (1894).
 “ “ Cotes, Ind. Mus. Notes, iii, No. 4, pp. 41, 42 (1894).
 “ *hemisphaericum* Comst., Man. Ins., p. 171 (1895).
 “ “ Davis, Spec. Bull. 2, Mich. Exp. Sta., p. 32 (1896).
 “ “ Harvey, Rep. Me. Exp. Sta., p. 118 (1896).
 “ *coffeæ* Green, Cocc. Ceylon, pt. i, p. 1 (1896).
 “ “ Ckll., Rev. Mus. Paul., ii, p. 71 (1897).
 “ *hemisphaericum* Green, Ent. Mon. Mag., xxxiii, p. 70 (1897).
 “ “ Berl. e Leon., Cherm. Ital., Fasc. ii, No. 48 (1897).
 “ “ Starnes, Bull. 6, Ga. Exp. Sta., p. 29 (1897).
 “ “ Osborn, Contr. Ia. Ag. Coll., No. 3, p. 3 (1898).
 “ “ Rolfs & Quaint., Cocc. Amer., Dec. i-ii, No. 2 (1898).
 “ “ Newell, Bull. 43, Ia. Exp. Sta., p. 169 (1899).
 “ “ de Charm., Pr. Soc. Amic. Scien., p. 40 (1899).
 “ “ Ckll., Biol. Centr. Amer., ii, pt. 2, p. 12 (1899).
 “ (*Saissetia coffeæ* Ckll. & Parr., The Industrialist, p. 164 (1899).
 “ *coffeæ* Ckll., Pr. Ac. N. Sci. Ph., p. 270 (1899).
 “ *hemisphaericum* Marlatt, Yearbook U. S. Dep. Ag., p. 276 (1900).
 “ “ Gossard, Bull. 51, Fla. Exp. Sta., p. 116 (1900).
 “ “ Lefroy, Scale Ins. Less. Antil., p. 43 (1901).
 “ “ King, Ent. News, xii, p. 311 (1901).

Saissetia hemisphaerica Ckll., The Ent. Student, ii, p. 32 (1901).

“ “ King, Psyche, ix, p. 297 (1902).

Lecanium (Saissetia) hemisphaericum Kuw., Pr. Cal. Ac. Sci., (3), iii, p. 63 (1902).

Coccus coffeæ Kirkaldy, Fauna Haw., iii, pt. 2, p. 105 (1902).

Lecanium hemisphaericum Thro, Bull. 209, Corn. Univ. Exp. Sta., p. 215 (1903).

Habitat.—Europe; New Zealand; Australia; Mauritius; Hawaiian Islands; Galapagos Islands; Brazil; West Indies; United States; Mexico.

On Oleander; Camellia; Eranthemum; Areca Catechu; Ixora; Cocos; Chrysophyllum; Croton variegatum: coffee: ferns; peach; orange; sago-palm; orchids; etc.—Ins. Life, v, p. 161; Bull. Bot. Dep. Jam., p. 71 (1894).

***Saissetia hemisphaerica hibernaculorum* (Bdv.).**

Chermes hibernaculorum Bdv., Ent. Hort., p. 337 (1867).

Lecanium hibernaculorum Targ., Catalogue, p. 37 (1869).

“ *hibernaculorum* Sign., Ann. Soc. Ent. Fr., (5), iii, p. 437 (1873).

Chermes “ Mask., N. Z. Trans., xi, p. 207 (1878).

- Lecanium hibernaculorum* Dougl., Ent. Mon. Mag., xxiii, p. 78 (1886).
 “ “ Mask., Ins. Nox. Agr. N. Z., p. 81 (1887).
 “ “ Coq., Bull. 26, Div. Ent. Dep. Ag., p. 27 (1892).
 “ “ Ckll., Gard. Chron., (3), xiii, p. 548 (1893).
 “ *hemisphæricum* var. *hibernaculorum* Ckll., Bull. Bot. Dep. Jam.,
 p. 71 (1894).
 “ (*Saissetia coffeæ* “ “ Ckll. & Parr., The Industrialist, p. 164 (1899).

Habitat.—Europe; New Zealand; Australia; Demerara; Jamaica; Cal.
 On peach; orange; oleander; coffee; *Zamia*; *Ardisia*; *Grevillea*; *Gardenia*; *Brexia*; sago-palm; ferns; various green-house plants.

***Saissetia hemisphærica clypeata* (Dougl.).**

- Lecanium clypeatum* Dougl., Ent. Mon. Mag., xxv, p. 58 (1888).
 “ (*Saissetia coffeæ* var. *clypeatum* Ckll. & Parr., The Industrialist,
 p. 164 (1899).

Habitat.—England; Ireland.

On *Adiantum capillus-veneris*; *Bryophyllum calycinum*; *Asparagus plumosus*.

994. *Saissetia* (?) *infrequens* (Hemp.).

- Lecanium infrequens* Hemp., Rev. Mus. Paul., iv, p. 431 (1900).
 “ “ “ Ann. Mag. N. H., (7), vii, p. 212 (1901).
Saissetia (?) “ Ckll., in litt. (1902).

Habitat.—Brazil.

On bark of *Xanthoxylum*.

995. *Saissetia mirifica* (Mask.).

- Lecanium mirificum* Mask., N. Z. Trans., xxix, p. 312 (1897).
 “ (*Saissetia*) *mirificum* Ckll. & Parr., The Industrialist, p. 164 (1899).
Saissetia mirifica Ckll., The Ent. Student, ii, p. 32 (1901).

Habitat.—Australia.

On *Acacia pendula*.

996. *Saissetia nigra* (Nietn.).

- Lecanium nigrum* Nietn., “Enemies of Coffee-tree,” p. 9 (1861).
 “ “ Atk., Jn. Asiatic Soc., Bengal, lv, p. 284 (1886).
 “ “ Green, Ind. Mus. Notes, i, p. 117 (1889).
 “ “ Dougl., Ent. Mon. Mag., xxvii, p. 95 (1891).
 “ “ Cotes, Ind. Mus. Notes, ii, p. 168 (1893).
 “ “ Mask., N. Z. Trans., xxvi, p. 73 (1893).
 “ “ “ The Entom., xxvii, p. 166 (1894).
 “ “ Ckll., Bull. Bot. Dep. Jam., p. 70 (1894).
 “ “ “ “ “ “ p. 256 (1896).
 “ “ Green, Ind. Mus. Notes, iv, p. 9 (1896).
 “ “ “ Cocc. Ceylon, pt. i, p. 1 (1896).
 “ “ Craw, 5th Bien. Rep. Cal. Bd. Hort., p. 46 (1896).
 “ “ Green, Ent. Mon. Mag., xxxiii, p. 71 (1897).

Lecanium (*Saissetia*) *nigrum* Ckll. & Parr., *The Industrialist*, p. 163 (1899).

" *nigrum* de Charm., *Pr. Soc. Amic. Scien.*, p. 40 (1899).

" " Lefroy, *Scale Ins. Less. Antil.*, p. 49 (1901).

Saissetia nigra King, *Psyche*, ix, p. 296 (1902).

Coccus nigrum Kirkaldy, *Fauna Haw.*, iii, pt. 2, p. 106 (1902).

Habitat.—Ceylon; India: Demerara: Mauritius: Hawaiian Islands; Grenada; Br. Guiana; Barbados: Trinidad; Porto Rico; Australia; New Zealand.

On coffee-tree; teak-tree; *Croton*; *Asparagus*; *Cobæa*; *Begonia*; *Terminalia* *Catappa*; cotton; *Psidium*; *Bambusa*; Ceara rubber.

997. *Saissetia nigrella* King.

Saissetia nigrella King, *Psyche*, ix, p. 296 (1902).

Habitat.—Natal.

On *Ficus*.

998. *Saissetia oleæ* (Bern.).

(*The Black scale*.)

Chermes oleæ Bern., *Mem. d'Hist. Nat. Acad.*, Marseille, p. 108 (1782).

Coccus olea Oliv., *Ency. Meth.*, vi, p. 95 (1791).

" *oleæ* Latr., *Hist. Nat. Crust. et Ins.*, ii, p. 384 (1804).

" " Giovene, *Mem. Soc. Ital.*, xiv, p. 128 (1809).

" " Fonsc., *Ann. Soc. Ent. Fr.*, iii, p. 206 (1834).

Lecanium oleæ Walk., *Cat. Br. Mus.*, Hom., p. 1070 (1852).

Chermes " Bdv., *Ent. Hort.*, p. 318 (1867).

Lecanium " Targ., *Studii sul. Cocc.*, pp. 29, 38 (1867).

Chermes " Bdv., *Insectologie Agricole*, p. 61 (1868).

Lecanium " Targ., *Catalogue*, p. 39 (1869).

" " Sign., *Ann. Soc. Ent. Fr.*, (5), iii, p. 440 (1873).

" " Mark, *Anat. Cocc.*, p. 47 (1876).

" " Comst., *Rep. U. S. Dep. Ag.*, 1880, p. 336 (1881).

" " " 2nd Rep. Dep. Ent. Corn. Univ., p. 134 (1883).

" " Saund., *Ins. Inj. to Fruits*, p. 407 (1883).

" " Mask., *N. Z. Trans.*, xvii, p. 28 (1884).

" " Hubbard, *Ins. Aff. Orange*, p. 53 (1885).

" " Mask., *Ins. Nox. Agr. N. Z.*, p. 82 (1887).

" " Penzig, *Studi Bot. sug. Agr.*, p. 529 (1887).

" " Comst., *Intr. Ent.*, p. 143 (1888).

" " Coq., *Ins. Life*, ii, p. 73 (1889).

" " McIntire, *Jn. Quekett Micr. Club*, p. 24 (1889).

" " Riley & How., *Ins. Life*, ii, p. 379 (1890).

" " Pack., 5th Rep. U. S. Ent. Com., p. 98 (1890).

" " Koebele, *Bull. 21, Div. Ent. Dep. Ag.*, p. 15 (1890).

" " Targ., *Cocc. deg. Agr. Ital.*, p. 11 (1891).

" " Berl., *Riv. Pat. Veg.*, i, p. 62 (1892).

" " Coq., *Bull. 26, Div. Ent. Dep. Ag.*, p. 28 (1892).

Lecanium oleæ Craw, 4th Bien. Rep. Cal. Bd. Hort., p. 93 (1894).

" " " Bull. 68, Cal. Exp. Sta., p. 15 (1894).

" " Ckll., Bull. Bot. Dep. Jam., p. 72 (1894).

" " Berl., Riv. Pat. Veg., iii, p. 54 (1894).

" " Green, Ent. Mon. Mag., xxxi, p. 231 (1895).

" " Comst., Man. Ins., p. 170 (1895).

" " Ckll., Can. Ent., xxvii, p. 257 (1895).

" " Saccardo, Riv. Pat. Veg., iv, p. 48 (1895).

" " Marlatt, Yearbook U. S. Dep. Ag., p. 220 (1896).

" " Davis, Spec. Bull. Mich. Exp. Sta., p. 31 (1896).

" " Lounsb., Rep. Ent. Cape Good Hope, p. 87 (1896).

" " Green, Ent. Mon. Mag., xxxiii, p. 72 (1897).

" " Frogg., Rep. Dep. Ag. N. S. W., No. 175, p. 5 (1897).

" " Berl. e Leon., Cherm. Ital., Fasc. iii, No. 67 (1898).

" " de Charm., Pr. Soc. Amic. Scien., p. 39 (1899).

" " Ckll., Biol. Centr. Amer., ii, pt. 2, p. 12 (1899).

" " Leon., Lab. di Ent. Agr., Portici, p. 3 (1899).

" " Marlatt, Yearbook U. S. Dep. Ag., p. 272 (1900).

" " Gossard, Bull. 51, Fla. Exp. Sta., p. 115 (1900).

" " Hemp., Rev. Mus. Paul., iv, p. 425 (1900).

" " Lounsb., Rep. Ent. Cape Good Hope, p. 5 (1900).

" " Lefroy, Scale Ins. Less. Antil., p. 50 (1901).

Saissetia " Ckll., The Ent. Student, ii, p. 31 (1901).

Lecanium (Saissetia) oleæ Kuw., Pr. Cal. Ac. Sci., (3), iii, p. 64 (1902).

Coccus oleæ Kirkaldy, Fauna Haw., iii, pt. 2, p. 106 (1902).

Lecanium oleæ Thro, Bull. 209, Corn. Univ. Exp. Sta., p. 214 (1903).

Habitat.—Europe; New Zealand; Australia; China; Japan; Hawaiian Islands; Mauritius; S. Africa; Ceylon; Brazil; West Indies; Mexico; Mass.; S. Car.; Ohio; Cal.

On orange; apple; pear; plum; olive; apricot; pomgranate; Oregon ash; honey locust; Magnolia; Eucalyptus; oleander; coffee; rose; Vitis; Camellia; guava; Terminalia Catappa, etc.

Saissetia oleæ testudo (Curt.).

Coccus testudo Curt., Gard. Chron., p. 444 (1843).

Lecanium " Sign., Ann. Soc. Ent. Fr., (5), iii, p. 441 (1873).

" " Dougl., Ent. Mon. Mag., xxiv, p. 95 (1887).

" " Green, " " " xxxi, p. 232 (1895).

" *oleæ* var. *testudo* Ckll., Check List, p. 331 (1896).

" *testudo* Green, Ent. Mon. Mag., xxxiii, p. 72 (1897).

Habitat.—England (in greenhouses.)

On *Brexia spinosa*: *B. madagascariensis*; *Crataeva gynandra*.

Saissetia oleæ miranda (Ckll. & Parr.).

Lecanium oleæ var. *mirandum* Ckll. & Parr., Biol. Centr. Amer., ii, pt. 2, p. 12 (1899).

Habitat.—Mexico.

On *Abutilon*.

999. Saissetia palmæ (Haw.).

Coccus palmæ Haw., Tr. Ent. Soc. Lond., p. 307 (1812).

Chermes cycadis Bdv., Ent. Hort., p. 323 (1867).

Lecanium " Dougl., Ent. Mon. Mag., xxiv, p. 96 (1887).

" palmæ " " " " p. 97 (1887).

" cycadis Green, " " " xxxi, p. 232 (1895).

" (Saissetia) palmæ Ckll. & Parr., The Industrialist, p. 164 (1899).

Habitat.—England and France (in greenhouses).

On Cycas and other palms.

1000. Saissetia reticulata (Ckll.).

Lecanium reticulatum Ckll., Am. Nat., xxix, p. 174 (1895).

" " " Rev. Mus. Paul., ii, p. 408 (1897).

" " Hemp., " " " iv, p. 426 (1900).

Saissetia reticulata Ckll., The Ent. Student, ii, p. 32 (1901).

Habitat.—Brazil.

On Myrtaceæ.

1001. Saissetia toluhana (Parr. & Ckll.).

Lecanium toluhanum Parr. & Ckll., The Industrialist, p. 164 (1899).

Saissetia toluhana Ckll., The Ent. Student, ii, p. 32 (1901).

Habitat.—Mexico.

On potato.

1002. Saissetia xanthoxylum (Hemp.).

Lecanium xanthoxylum Hemp., Rev. Mus. Paul., iv, p. 430 (1900).

Saissetia " Ckll., Ann. Mag. N. H., (7), ix, p. 453 (1902).

Habitat.—Brazil.

On Xanthoxylum.

Genus **MEGASAISETIA** Ckll. Type, inflata.

s. g. Megasaissetia Ckll., The Ent. Student, ii, p. 32 (1901); g. in litt. (1902).

1003. Megasaissetia inflata (Ckll. & Parr.).

Lecanium (Saissetia) inflatum Ckll. & Parr., Biol. Centr. Amer., ii, pt. 2, p. 13 (1899).

Saissetia inflata Ckll., The Ent. Student, ii, p. 32 (1901).

Megasaissetia inflata Ckll., in litt. (1902).

Habitat.—Mexico.

On " Laurel-tree."

Genus **PLATYSAISETIA** Ckll. Type, castilloæ.

s. g. Platysaissetia Ckll., The Ent. Student, ii, p. 32 (1901); g. in litt. (1902).

1004. *Platysaissetia castilloæ* (Ckll.).

Lecanium (*Saissetia*) *castilloæ* Ckll., Ann. Mag. N. H., (7), i, p. 436 (1898).

" *castilloæ* Ckll., Pr. Ac. N. Sci. Ph., p. 271 (1899).

Saissetia " " The Ent. Student, ii, p. 32 (1901).

Platysaissetia " " in litt. (1902).

Habitat.—Mexico.

On *Castilleja elastica*.

Genus **MYXOLECANIUM** Beccari. Type, *kibaræ*.

Myxolecanium Beccari, Bull. Soc. Ent. Ital., ix, p. 317 (1877): Ckll., Can.

Ent., xxxiii, p. 58 (1901).

1005. *Myxolecanium kibaræ* Beccari.

Myxolecanium kibaræ Beccari, Bull. Soc. Ent. Ital., ix, p. 317 (1877).

Habitat.—New Guinea.

On *Kibara*.

Genus **PHYSOKERMES** Targ. Type, *abietis*=*piceæ*.

Physokermes Targ., Catalogue, p. 41 (1869): Sign., Ann. Soc. Ent. Fr., (5),

iv, p. 87 (1874): Ckll., Can. Ent., xxxiii, p. 58 (1901).

1006. *Physokermes coloradensis* Ckll.

Physokermes coloradensis Ckll., The Entom., xxviii, p. 101 (1895).

" " Gillette & Baker, Bull. 31, Col. Exp. Sta., p. 126 (1895).

Habitat.—Colorado.

On spruce; *Pinus edulis*.

1007. *Physokermes insignicola* (Craw).

Lecanium insignicola Craw, Bull. 68, Cal. Exp. Sta., p. 14 (1894).

" " " 4th Bien. Rep. Cal. Bd. Hort., p. 92 (1894).

" " " Ann. Rep. Cal. Bd. Hort., pp. 256, 269 (1894).

Physokermes " Ckll., Can. Ent., xxvii, p. 258 (1895).

" " Am. Nat., xxxi, p. 591 (1897).

Habitat.—California.

On *Pinus insignis*.

1008. *Physokermes piceæ* (Schr.).

Chermes abietis rotundus Geoff., Hist. Abr. Ins., i, p. 507 (1762).

|| *Coccus abietis* Mod. (non Schr.), Act. Goth., ii, p. 20 (1778).

Chermes " Fourc., Ent. Paris., i, p. 229 (1785).

Coccus " Gmel., Syst. Nat., Ed. xiii, p. 2221 (1789).

Chermes " Oliv., Ency. Meth., vii, p. 440 (1792).

Coccus piceæ Schr., Faun. Boica, ii, pt. i, p. 146 (1801).

" *abietis* Turton, Syst. Nat., p. 715 (1801).

" " Bechst., Forstins., i, p. 286 (1804).

" *hemicryphus* Dalm., K. Vet. Akad. Handl., xlv, p. 368 (1825).

- Coccus racemosus* Ratz., Stett. Ent. Zeit., iv, p. 204 (1843).
 " " " Forstins., iii, p. 191, pl. xi, fig. 8 (1844).
Chermes piceæ Bdv., Ent. Hort., p. 320 (1867).
Lecanium racemosus Gour., Ins. nuis. aux Forêts, pp. 159, 161 (1867).
Physokermes " Targ., Catalogue, p. 41 (1869).
 " *abietis* Sign., Ann. Soc. Ent. Fr., (5), iii, p. 443 (1873).
 " *racemosus* " " " " " " " p. 445 (1873).
Coccus hemicyphus " " " " " " " pp. 443, 446 (1873).
Physokermes " " " " " " " iv, p. 88 (1874).
Lecanium racemosum Altum, Forstzoologie, iii, pt. 2, p. 368 (1881).
Physokermes abietis Newst., Ent. Mon. Mag., xxix, p. 207 (1893).
Lecanium racemosum Henschel, Die Schäd. Forst. & Obst. Ins., p. 511 (1895).
 " *hemicyphus* Eckst., Forst. Zool., p. 558 (1897).
 Habitat.—Europe.
 On *Abies excelsa*; *Pinus*.

Genus **CRYPTES** Crawf. Type, *baccatus*.

- Cryptes* "Crawf.," Mask., N. Z. Trans., xxiv, p. 21 (1891): Ckll. & Parr., The Industrialist, p. 162 (1899): Ckll., Can. Ent., xxxiii, p. 58 (1901).

1009. *Cryptes baccatus* (Mask.).

- Lecanium baccatum* Mask., N. Z. Trans., xxiv, p. 20 (1891).
 " " " " " xxv, p. 217 (1892).
 " " " " " xxix, p. 311 (1897).
 " " Full., Tr. Ent. Soc. Lond., p. 458 (1899).
Cryptes baccatus Ckll. & Parr., The Industrialist, p. 161 (1899).
Lecanium baccatum Frog., Agr. Gaz. N. S. W., July, p. 19 (1902).
 Habitat.—Australia.
 On *Acacia armata*; *A. calamifolia*; *A. linearis*; *A. longifolia*; *A. melanoxylon*.

***Cryptes baccatus marmoreus* (Full.).**

- Lecanium baccatum* var. *marmoreum* Full., Notes on Cocc. W. Austr., p. 6 (1897).
 " " " " " Tr. Ent. Soc. Lond., p. 458 (1899).
 Habitat.—W. Australia.
 On *Acacia*.

Genus **LECANOPSIS** Targ. Type, *rhizophila*.

- Rhizobium* Targ., Studii sul. Cocc., p. 23 (1867). No type specified.
Lecanopsis Targ., Catalogue, p. 36 (1869): Sign., Ann. Soc. Ent. Fr., (5), iv, p. 93 (1874): Newst., Ent. Mon. Mag., xxix, p. 205 (1893): Ckll., Can. Ent., xxxiii, p. 58 (1901).

1010. *Lecanopsis brevicornis* Newst.

- Lecanopsis brevicornis* Newst., Ent. Mon. Mag., xxxii, p. 59 (1896).
 Habitat.—England.
 On roots of grass.

1011. *Lecanopsis formicarum* Newst.

Lecanopsis formicarum Newst., Ent. Mon. Mag., xxix, pp. 138, 206 (1893).

" " " " " " xxx, p. 206 (1894).

Habitat.—England.

In nests of *Formica nigra*.

1012. *Lecanopsis lineolatae* King & Ckll.

Lecanopsis lineolatae King & Ckll., Can. Ent., xxix, p. 90 (1897).

Habitat.—Mass.

In nests of *Cremastogaster lineolata* Say.

1013. *Lecanopsis rhizophila* Targ.

Lecanopsis rhizophila Targ., Catalogue, p. 36 (1869).

" *rhizophila* Sign., Ann. Soc. Ent. Fr., (5), iv, p. 93 (1874).

" *rhizophila* " Bull. " " " " " p. vii (1874).

" *rhizophila* Newst., Ent. Mon. Mag., xxix, p. 205 (1893).

Habitat.—Europe.

On roots of *Asperula*.

Genus **ACLERDA** Sign. Type, subterranea.

Aclerda Sign., Ann. Soc. Ent. Fr., (5), iv, p. 96 (1874); Buffa, Riv. Pat. Veg., vi, p. 138 (1897); Ckll., Can. Ent., xxxiii, p. 58 (1901); Ent. News, xiii, p. 182 (1902).

Pseudolecanium Ckll., Pr. Ac. N. Sci. Ph., p. 262 (1899).

1014. *Aclerda berlesii* Buffa.

Aclerda berlesii Buffa, Riv. Pat. Veg., vi, pp. 135-139 (1897).

" " Berl. e Leon., Cherm. Ital., Fasc. iii, p. 63 (1898).

Habitat.—Italy.

On *Arundo donax*.

1015. *Aclerda californica* (Ehrh.).

Nidularia(?) *californica* Ehrh., Can. Ent., xxxi, p. 103 (1899).

Pseudolecanium californicum Parr., Bull. 98, Kan. Exp. Sta., p. 145 (1900).

Habitat.—Cal.; Kan.; New Mexico.

On *Andropogon furcatus*.

1016. *Aclerda digitata* (Ckll.).

Pseudolecanium digitatum Ckll., Ann. Mag. N. H., (7), ix, p. 24 (1902).

Habitat.—Natal.

On grass.

1017. *Aclerda japonica* Newst.

Aclerda japonica Newst., Ent. Mon. Mag., xxxvii, p. 84 (1901).

Habitat.—England (in hothouses).

On *Arundinaria japonica*.

1018. *Aclerda obscura* (Parr.).

Pseudolecanium obscurum Parr., Bull. 98, Kan. Exp. Sta., p. 144 (1900).

Habitat.—Kansas.

On *Andropogon scoparius*; *Sporobolus longifolius*.

1019. *Aclerda subterranea* Sign.

Aclerda subterranea Sign., Ann. Soc. Ent. Fr., (5), iv, p. 97 (1874).

Habitat.—France.

On *Agropyrum*; *Milium*.

1020. *Aclerda tokionis* (Ckll.).

Sphærococcus (*Pseudolecanium*) *tokionis* Ckll., Psyche, vii, Suppl., i, p. 19 (1896).

“ “ “ “ Bull. 4, T. s., Dep. Ag., p. 49 (1896).

Pseudolecanium tokionis Ckll., Pr. Ac. N. Sci. Ph., p. 263 (1899).

“ “ Kuw., Pr. Cal. Ac. Sci., (3), ii, p. 403 (1901).

“ “ “ “ “ “ “ “ “ “ iii, p. 57 (1902).

Habitat.—California; Japan.

On bamboo.

Genus *ALECANOPSIS* Ckll. Type, filicum.

Alecanopsis Ckll., Can. Ent., xxxiii, p. 58 (1901).

1021. *Alecanopsis filicum* (Mask.).

Lecanopsis filicum Mask., Pr. Linn. Soc. N. S. W., (2), viii, p. 225 (1893).

Alecanopsis “ Ckll., Can. Ent., xxxiii, p. 58 (1901).

Habitat.—N. S. Wales.

On *Doodia aspera*.

The following species heretofore catalogued under *Lecanium* are allowed to retain that name until the insects can be studied and their proper location determined.

1022. *Lecanium casuarinæ* Mask.

Lecanium casuarinæ Mask., N. Z. Trans., xxx, p. 240 (1898).

“ “ Ckll. & Parr., The Industrialist, p. 164 (1899).

Habitat.—Australia.

1023. *Lecanium emerici* Planch.

Lecanium emerici Planch., Le Kermes du Chêne, p. 17 (1864).

“ “ Sign., Ann. Soc. Ent. Fr., (4), viii, p. 525 (1868).

“ “ “ “ “ “ “ “ (5), iii, pp. 420, 444 (1873).

“ “ Dougl., Ent. Mon. Mag., xxiv, p. 99 (1887).

Habitat.—Europe.

On *Quercus ilex*; *Q. coccifera*.

1024. *Lecanium globulosum* Mask.

Lecanium globulosum Mask., Ent. Mon. Mag., xxxiii, p. 243 (1897).

" " " N. Z. Trans., xxx, p. 238 (1898).

Habitat.—Hong Kong, China.

On *Stillingia sebifera*.

1025. *Lecanium guerinii* Sign.

Lecanium guerinii Sign., Ann. Soc. Ent. Fr., (4), ix, p. 96 (1869).

Habitat.—Mauritius.

On sugar-cane.

1026. *Lecanium imbricans* Green.

Lecanium imbricans Green, Ind. Mus. Notes, v, p. 94 (1903).

Habitat.—India.

On *Ficus mysorensis*.

1027. *Lecanium krugeri* Zehnt.

Lecanium krugeri Zehnt., Mede. Proef. Suik., Java, No. 40 (1897).

" " " Zool. Centralb., p. 804 (1898).

Habitat.—Java.

1028. *Lecanium lidgetti* Ckll. in litt, new name.

|| *Lecanium australis* Lidg., Victorian Naturalist, xviii, p. 59 (1901).

Habitat.—Australia.

1029. *Lecanium padi* (Schr.).

Coccus padi Schr., Faun. Boica, ii, pt. i, p. 145 (1801).

Lecanium padi Sign., Ann. Soc. Ent. Fr., (4), x, p. 109 (1870).

Habitat.—Europe.

On *Prunus Padus*.

1030. *Lecanium patersoniæ* Mask.

Lecanium patersoniæ Mask., N. Z. Trans., xxvii, p. 57 (1894).

" " Ckll. & Parr., The Industrialist, p. 164 (1899).

Habitat.—Australia.

On *Patersonia glabrata*.

1031. *Lecanium wistariæ* Sign.

Lecanium wistariæ Sign., Ann. Soc. Ent. Fr., (5), iii, p. 433 (1873).

Habitat.—France.

On "*Glycine*."

Subfamily DIASPINÆ.

Genus **PROTODIASPIS** Ckll. Type, parvula.

Protodiaspis Ckll., Ann. Mag. N. H., (7), i, p. 428 (1898).

1032. Protodiaspis parvula Ckll.

Protodiaspis parvula Ckll., Ann. Mag. N. H., (7), i, p. 428 (1898).

Habitat.—Mexico.

On oak.

Genus **XANTHOPHTHALMA** Ckll. & Parr. Type, concinnum.

Xanthophthalma Ckll. & Parr., Biol. Centr. Amer., ii, pt. 2, p. 33 (1899).

1033. Xanthophthalma concinnum Ckll. & Parr.

Xanthophthalma concinnum Ckll. & Parr., Biol. Centr. Amer., ii, pt. 2, p. 33 (1899).

Habitat.—Mexico.

On "Laurel-tree."

Genus **CHIONASPIS** Sign. Type, salicis.

Chionaspis Sign., Ann. Soc. Ent. Fr., (4), ix, p. 442 (1869): Comst., Rep. U. S. Dep. Ag., 1880, p. 313 (1881); 2nd Rep. Dep. Ent. Corn. Univ., p. 97 (1883); Mask., Ins. Nox. Agr. N. Z., p. 54 (1887); Green, Coccidæ Ceylon, pt. ii, p. 105 (1899); Cooley, Spec. Bull. Mass. Exp. Sta., p. 8 (1899); Newst., Mon. Brit. Coccidæ, i, p. 179 (1901).

1034. Chionaspis acuminata Green.

Chionaspis acuminata Green, Ind. Mus. Notes, iv, p. 3 (1896).

" " " Cocc. Ceylon, pt. ii, p. 136 (1899).

Habitat.—Ceylon.

On Ardisia.

1035. Chionaspis agonis Full.

Chionaspis agonis Full., Notes on Cocc. W. Austr., p. 5 (1897).

" " " Tr. Ent. Soc. Lond., p. 471 (1899).

Habitat.—W. Australia.

On Agonis flexuosa.

1036. Chionaspis americana Johnson.

(*Elm-tree white scale*.)

Chionaspis americana Johns., Ent. News, vii, p. 150 (1896).

" " " Bull. Ill. St. Lab. N. H., iv, p. 390 (1896).

" " Cooley, Spec. Bull. Mass. Exp. Sta., p. 41 (1899).

" " Newell, Bull. 43, Ia. Exp. Sta., p. 152 (1899).

Chionaspis americana Hunter, Kan. Univ. Quar., ix, p. 102 (1900).

" " Luggier, 6th Rep. Minn. Exp. Sta., p. 238 (1900).

" " Quaint. & Scott, Cocc. Amer., Dec. iii-iv, No. 16 (1901).

" " King, Can. Ent., xxxiv, p. 62 (1902).

Habitat.—Mass.; Conn.; N. Y.; Ohio; Ill.; Mo.; Kan.; Tex.; Minn.; Okla.
On *Ulmus americanus*; "Camperdown elm."

1037. *Chionaspis arundinariæ* Green.

Chionaspis arundinariæ Green, Cocc. Ceylon, pt. ii, p. 127 (1899).

Habitat.—Ceylon.

On *Arundinaria*.

1038. *Chionaspis assimilis* Mask.

Chionaspis assimilis Mask., Tr. Roy. Soc. S. Austr., p. 102 (1888).

" " Craw, 5th Bien. Rep. Cal. Bd. Hort., p. 35 (1896).

Habitat.—S. Australia; California (at quarantine from Australia).

On *Eucalyptus*.

1039. *Chionaspis bambusæ* Ckll.

Chionaspis bambusæ Ckll., Psyche, vii, Suppl., i, p. 21 (1896).

" " " Bull. 4, T. s., Dep. Ag., p. 54 (1896).

" " Kuw., Pr. Cal. Ac. Sci., (3), iii, p. 76 (1902).

Habitat.—Japan.

On bamboo.

1040. *Chionaspis berlesii* Leon.

Chionaspis berlesii Leon., Riv. Pat. Veg., vi, p. 275 (1898).

" " Berl. e Leon., Cherm. Ital., Fasc. iii, No. 54 (1898).

Habitat.—Italy.

On *Asparagus acutifolius*.

1041. *Chionaspis bilobis* Newst.

Chionaspis bilobis Newst., Ent. Mon. Mag., xxxi, p. 233 (1895).

Habitat.—Algeria.

On *Deverra scoparia*.

1042. *Chionaspis caryæ* Cooley.

Chionaspis caryæ Cooley, Can. Ent., xxx, p. 86 (1898).

" " Berl., Riv. Pat. Veg., vi, p. 379 (1898).

" " Cooley, Spec. Bull. Mass. Exp. Sta., p. 40 (1899).

Habitat.—Washington, D. C.

On hickory.

1043. *Chionaspis citri* Comst.

(*Orange Chionaspis*.)

Chionaspis euonymi Comst., Rep. U. S. Dep. Ag., 1880, p. 313 (1881) in part.

" *citri* Comst., 2nd Rep. Dep. Ent. Corn. Univ., p. 100 (1883).

" " Mask., N. Z. Trans., xvii, p. 23 (1884).

" " " Ins. Nox. Agr. N. Z., p. 54 (1887).

Chionaspis citri Ckll., Bull. Bot. Dep. Jam., No. 36, p. 8 (1892).

" " Morg., Ent. Mon. Mag., xxviii, p. 14 (1892).

" " Mask., N. Z. Trans., xxv, p. 211 (1892).

" " Riley & How., Ins. Life, v, p. 203 (1893).

" " Morg., Spec. Bull. La. Exp. Sta., p. 63 (1893).

" " Craw, Bull. 68, Cal. Bd. Hort., p. 16 (1894).

" " " 4th Bien. Rep. Cal. Bd. Hort., p. 94 (1894).

" " Ckll., Jn. Trin. Nat. Club, p. 312 (1894).

" " " Bull. N. Mex. Exp. Sta., p. 5 (1895).

" " " Ann. Mag. N. H., (6), xvi, p. 62 (1895).

" " " Bull. Bot. Dep. Jam., iii, p. 256 (1896).

" " Towns., Bull. 4, T. s., Dep. Ag., p. 11 (1896).

" euonymi Davis, Spec. Bull. 2, Mich. Exp. Sta., p. 38 (1896).

" citri Craw, 5th Bien. Rep. Cal. Bd. Hort., p. 38 (1896).

Howardia " Berl. e Leon., Annali di Agr., p. 125 (1898).

Chionaspis " Marlatt, Yearbook U. S. Dep. Ag., p. 270 (1900).

" " Lefroy, Scale Ins. Less. Antil., p. 58 (1901).

Habitat.—S. States; West Indies: Mexico; Bermuda; Australia; Japan; Samoa; New Zealand.

On orange; *Euonymus latifolius*; palms; *Osmanthus*, etc.

1044. *Chionaspis colemani* Kuwana.

Chionaspis colemani Kuw., Pr. Cal. Ac. Sci., (3), iii, p. 77 (1902).

Habitat.—Japan.

On bamboo.

1045. *Chionaspis corni* Cooley.

Chionaspis corni Cooley, Spec. Bull. Mass. Exp. Sta., p. 15 (1899).

" " King, Can. Ent., xxxiv, p. 61 (1902).

Habitat.—Mass.; Ohio.

On *Cornus paniculata*; *C. alternifolia*.

1046. *Chionaspis depressa* Zehnt.

Chionaspis depressa Zehnt., Mede. Proef. Suik., Java, n. s., No. 36, p. 21 (1897).

Habitat.—E. Java.

On *Saccharum ciliare*.

1047. *Chionaspis difficilis* Ckll.

Chionaspis difficilis Ckll., Psyche, vii, Suppl., i, p. 21 (1896).

" " " Bull. 4, T. s., Dep. Ag., p. 42 (1896).

" " " Craw, 5th Bien. Rep. Cal. Bd. Hort., p. 38 (1896).

Habitat.—Japan; California (at quarantine from Japan).

On *Elæagnus*.

1048. *Chionaspis dysoxyl* Mask.

Chionaspis dysoxyl Mask., N. Z. Trans., xvii, p. 22 (1884).

" " " Ins. Nox. Agr. N. Z., p. 55 (1887).

Chionaspis dysoxyli Mask., N. Z. Trans., xxii, p. 135 (1889).

" " " " " xxiii, p. 8 (1890).

" " " " " xxvii, p. 50 (1894).

" " Cooley, Spec. Bull. Mass. Exp. Sta., p. 37 (1899).

Habitat.—New Zealand.

On *Dysoxylon spectabile*; *Hoheria angustifolia*; *Melicytus ramiflorus*.

1049. *Chionaspis elæagni* Green.

Chionaspis elæagni Green, Ind. Mus. Notes, iv, p. 3 (1896).

" " " Cocc. Ceylon, pt. ii, p. 138 (1899).

Habitat.—Ceylon.

On *Elæagnus latifolia*.

1050. *Chionaspis elongata* (Green).

Mytilaspis elongata Green, Ind. Mus. Notes, iv, p. 4 (1896).

Chionaspis " " Cocc. Ceylon, pt. ii, p. 125 (1896).

Habitat.—Ceylon.

On *Arundinaria*.

1051. *Chionaspis ethelæ* Full.

Chionaspis ethelæ Full., Notes on Cocc. W. Austr., p. 5 (1897).

" " " Tr. Ent. Soc. Lond., p. 471 (1899).

Habitat.—W. Australia.

On *Eucalyptus*.

1052. *Chionaspis euonymi* Comst.

Chionaspis euonymi Comst., Rep. U. S. Dep. Ag., 1889, p. 313 (1881) in part.

" " " 2nd Rep. Dep. Ent. Corn. Univ., p. 101 (1883).

" " Targ., Annali di Agr., p. 396 (1884).

" " Dougl., Ent. Mon. Mag., xxii, p. 249 (1886).

" " Comst., Intr. Ent., p. 151 (1888).

" " Morg., Ent. Mon. Mag., xxviii, p. 16 (1892).

" *euonymi* Saccardo, Riv. Pat. Veg., iv, p. 53 (1895).

" " Berl. e Leon., Cherm. Ital., Fasc. i, No. 17 (1895).

" *euonymi* Quaint. & Scott, Cocc. Amer., Dec. iii-iv, No. 17 (1901).

" " Kuw., Pr. Cal. Ac. Sci., (3), iii, p. 75 (1902).

Habitat.—N. Y.; Va.; Ga.; Ohio; England; France.

On *Euonymus latifolius*; *E. japonicus*; orange.

1053. *Chionaspis exalbida* Ckll.

Chionaspis exalbida Ckll., The Entom., xxxv, p. 112 (1902).

Habitat.—Natal.

On leaves of aloe.

1054. *Chionaspis fodiens* Green.

Chionaspis fodiens Green, Coccidæ Ceylon, pt. ii, p. 155 (1898).

Habitat.—Ceylon.

On *Loranthus*.

1055. *Chionaspis furfura* (Fitch).*(The Scurfy scale.)*

- — Harr., Rep. Ins. Mass. Inj. to Veg., p. 202 (1841).
Aspidiotus furfurus Fitch, 3rd Rep. Ins. N. Y., p. 352 (1856).
 “ *cerasi* “ “ “ “ “ p. 368 (1856).
 — — Harr., Treat. Ins. Inj. to Veg., Ed. 3, p. 255 (1862).
 ?*Coccus harrisii* Walsh, Pract. Ent., ii, p. 31 (1866).
Aspidiotus “ “ “ “ “ p. 119 (1867).
 “ “ “ 1st Rep. Ins. Ill., pp. 36, 53 (1868).
 “ “ Riley, 1st Rep. Ins. Mo., p. 7 (1869).
 “ “ “ Am. Ent., ii, pp. 110, 181 (1870).
 “ “ “ 2nd Rep. Ins. Mo., p. 9 (1870).
 “ “ Beth., Rep. Ent. Soc. Ont., i, p. 303 (1870).
 “ *cerasi* Sign., Ann. Soc. Ent. Fr., (4), x, p. 107 (1870).
 “ *harrisii* Glover, Rep. U. S. Dep. Ag., 1870, p. 88 (1871).
 “ “ Pack., Guide to Study of Ins., p. 530 (1872).
 “ “ Bessey, Rep. Ia. St. Ag. Soc., p. 232 (1875).
Diaspis “ Sign., Ann. Soc. Ent. Fr., (5), vi, p. 604 (1876).
Aspidiotus “ Thom., 7th Rep. Ins. Ill., p. 108 (1878).
Diaspis “ Riley, Am. Nat., xv, p. 487 (1881).
Chionaspis furfurus Lint., 1st Rep. Ins. N. Y., p. 331 (1882).
 “ “ Osborn, Tr. Ia. Hor. Soc., xvii, p. 211 (1883).
 “ “ Saund., Ins. Inj. to Fruits, p. 44 (1883).
Aspidiotus cerasi “ “ “ “ “ p. 204 (1883).
 “ “ Osborn, Bull. 2, Ia. Ag. Exp. Sta. (1884).
 “ “ Comst., Intr. Ent., p. 151 (1888).
 “ “ Lint., 4th Rep. Ins. N. Y., p. 208 (1888).
 “ “ Tryon, Rep. Ins. & Fungous Pests, No. 1, p. 89 (1889).
 “ “ Riley, Ins. Life, i, p. 324 (1889).
Chionaspis furfurus Lint., 5th Rep. Ins. N. Y., p. 300 (1889).
 “ “ Weed, Bull. 4, Ohio Exp. Sta., p. 128 (1890).
 “ “ Pack., 5th Rep. U. S. Ent. Com., p. 537 (1890).
Aspidiotus cerasi “ “ “ “ “ “ p. 538 (1890).
 “ *furfurus* Morg., Ent. Mon. Mag., xxvi, p. 43 (1890).
 A species of *Coccus* Downing, Fruits and Trees of America, p. 66 (1890).
Chionaspis furfurus Weed, Insects & Insecticides, p. 66 (1891).
 “ “ Gillette, Ins. Life, iii, p. 259 (1891).
 “ “ Towns., Bull. 3, N. Mex. Exp. Sta., p. 12 (1891).
 “ “ Weed, Rep. Columbian Hor. Soc., p. 16 (1891).
 “ “ Troop, Tr. Ind. Hor. Soc., p. 75 (1891-1892).
 “ “ Webster, Bull. 45, Ohio Exp. Sta., p. 208 (1892).
 “ “ Lint., 8th Rep. Ins. N. Y., 1891, pp. 293, 299 (1893).
 “ “ “ 9th “ “ “ 1892, p. 440 (1893).
 “ “ Osborn, Rep. Ia. St. Hor. Soc., xxviii, p. 122 (1893).
 “ “ Howard, Can. Ent., xxvi, p. 354 (1894).
Aspidiotus “ “ Ins. Life, vii, p. 5 (1894).

- Chionaspis furfurus Smith, Rep. N. J. Exp. Sta., p. 496 (1894).
- " " Bruner, Rep. Neb. St. Hor. Soc., p. 175 (1894).
- " " Marlatt, Ins. Life, vii, p. 120 (1894).
- " " Howard, Yearbook U. S. Dep. Agr., 1894, p. 259 (1895).
- " " Comst., Man. Ins., p. 174 (1895).
- " " Lint., 10th Rep. Ins. N. Y., p. 518 (1895).
- " " " Bull. N. Y. St. Mus., p. 270 (1895).
- " " Fletcher, Rep. Can. Exp. Farms, p. 148 (1895-1896).
- " " Howard, Tr. Mass. Hor. Soc., p. 89 (1896).
- " " Lint., 11th Rep. Ins. N. Y., p. 202 (1896).
- " " Garman, Rep. Ky. Exp. Sta., p. xxxvii (1896).
- " " Smith, Econ. Ent., p. 119 (1896).
- " " Coons, Rep. Conn. Bd. Agr., p. 16 (1896).
- " " Starnes, Bull. 36, Ga. Exp. Sta., p. 27 (1896).
- " " Lowe, Bull. 136, N. Y. Exp. Sta., p. 582 (1897).
- " " Lint., 12th Rep. Ins. N. Y., p. 348 (1897).
- " " Webster, Bull. 81, Ohio Exp. Sta., p. 210 (1897).
- " " Osborn, Pr. Ia. Ac. Sci., v, p. 224 (1898).
- " " Gillette, Bull. 47, Col. Exp. Sta., p. 12 (1898).
- " " Chambliss, Bull. 4, Tenn. Exp. Sta., p. 147 (1898).
- " " Kirkland, Mass. Crop Rep., June, p. 28 (1898).
- " " Pettit, Bull. 160, Mich. Exp. Sta., p. 415 (1898).
- " " Osborn, Contr. Ia. Ag. Coll., No. 3, pp. 4, 5 (1898).
- " furfura Cooley, Spec. Bull. Mass. Exp. Sta., p. 23 (1899).
- " furfurus King, Can. Ent., xxxi, p. 251 (1899).
- " " Forbes, 20th Rep. Ins. Ill., p. 16 (1899).
- " " Garman, Bull. 80, Ky. Exp. Sta., p. 220 (1899).
- " " Newell, Bull. 43, Ia. Exp. Sta., p. 150 (1899).
- " " Smith, Bull. 140, N. J. Exp. Sta., p. 7 (1899).
- " " Bruner, Rep. Neb. St. Hor. Soc., p. 147 (1899).
- " furfura Cooley, 6th Rep. Mont. Exp. Sta., p. 88 (1899).
- " furfurus Lockhead, Rep. Ent. Soc. Ont., p. 68 (1899).
- " " " Dep. Agr. Ont., p. 42 (1900).
- " " Howard, Bull. 22, n. s., Dep. Agr., pp. 80, 81, 82 (1900).
- " " Lugger, 6th Rep. Minn. Exp. Sta., p. 236 (1900).
- " " Beach, Lowe, Stewart, 18th Rep. N. Y. Exp. Sta., p. 416 (1900).
- " " Bruner, Rep. Neb. St. Hor. Soc., p. 84 (1900).
- " " Frank & Kruger, Schildlausbuch, p. 100 (1900).
- " " Ckll., Science, n. s., xi, p. 671 (1900).
- " furfura Fernald H. T., Mass. Crop Rep., May, p. 33 (1901).
- " " Felt, Bull. 46, Rep. Ins. N. Y., p. 300 (1901).
- " " Forbes, Circ. 36, Ill. Exp. Sta., p. 22 (1901).
- " furfurus Quaint & Scott, Cocc. Amer., Dec. iii-iv, No. 18 (1901).
- " " Newst., Mon. Brit. Cocc., i, p. 186 (1901).
- " " Banks, Bull. 34, n. s., Dep. Agr., p. 14 (1902).

Chionaspis furfura Forbes, 22nd Rep. Ins. Ill., p. 118 (1903).

Habitat.—Canada; Nova Scotia; Prince Edward's Island; United States; England (introduced from America).

On apple; pear; cherry; quince; crab-apple; peach; choke-cherry; black walnut; mountain ash; elm; *Pyrus japonica*; currant; hawthorn.

***Chionaspis furfura fulva* King.**

Chionaspis furfurus var. *fulvus* King, Psyche, viii, p. 334 (1899).

Habitat.—Mass.

On *Rhamnus cathartica*.

***Chionaspis furfura ulmi* Ckll.**

Chionaspis furfurus var. *ulmi* Ckll., Pr. U. S. Nat. Mus., xix, p. 766 (1897).

Habitat.—Texas.

On elm.

1056. *Chionaspis galliformens* Green.

Chionaspis galliformens Green, Cocc. Ceylon, pt. ii, p. 158 (1899).

Habitat.—Ceylon.

On *Hedyotis lasertiana*.

1057. *Chionaspis graminis* Green.

Chionaspis graminis Green, Ind. Mus. Notes, iv, p. 3 (1896).

“ “ “ Cocc. Ceylon, pt. ii, p. 123 (1899).

Habitat.—Ceylon; Japan.

On bamboo; *Andropogon* (lemon-grass).

1058. *Chionaspis hedyotidis* Green.

Chionaspis hedyotidis Green, Cocc. Ceylon, pt. ii, p. 142 (1899).

Habitat.—Ceylon.

On *Hedyotis auricularia*; *H. Lawsoniæ*.

1059. *Chionaspis herbæ* Green.

Chionaspis herbæ Green, Cocc. Ceylon, pt. ii, p. 132 (1899).

“ “ “ Cooley, Spec. Bull. Mass. Exp. Sta., p. 37 (1899).

Habitat.—Ceylon.

On grasses.

1060. *Chionaspis*(?) *hikosani* Kuwana.

Chionaspis(?) *hikosani* Kuw., Pr. Cal. Ac. Sci., (3), iii, p. 76 (1902).

Habitat.—Japan.

On *Phyllostachys bambusoides*.

1061. *Chionaspis howardi* Cooley.

Chionaspis howardi Cooley, Can. Ent., xxx, p. 88 (1898).

Habitat.—District of Columbia.

On East Indian bamboo.

1062. *Chionaspis lintneri* Comst.

Chionaspis lintneri Comst., 2nd Rep. Dep. Ent. Corn. Univ., p. 103 (1883).

" " " Can. Ent., xxvii, p. 33 (1895).

" " Cooley, " " xxx, p. 89 (1898).

" " King, " " xxxi, p. 252 (1899).

" " Cooley, Spec. Bull. Mass. Exp. Sta., p. 22 (1899).

Habitat.—Can.; Mass.; N. Y.; Prince Edward's Island.

On alder; willow; *Viburnum lantanoides*; *Cornus stolonifera*; *Benzoin odoriferum*; *Amelanchier canadensis*; *Betula papyrifera*; *Dirca palustris*, etc.

***Chionaspis lintneri betulæ* Cooley.**

Chionaspis lintneri betulæ Cooley, Can. Ent., xxx, p. 85 (1898).

Habitat.—Prince Edward's Island.

On *Betula papyrifera*.

1063. *Chionaspis longiloba* Cooley.

Chionaspis longiloba Cooley, Spec. Bull. Mass. Exp. Sta., p. 16 (1899).

Habitat.—Texas.

On cottonwood.

1064. *Chionaspis madiunensis* Zehnt.

Chionaspis madiunensis Zehnt., Mede. Proef. Suik., Java, (3), No. 6, p. 1 (1898).

Habitat.—Java.

On sugar-cane.

1065. *Chionaspis major* Kll.

Chionaspis major Kll., Ent. News, v, p. 43 (1894).

" " " Can. Ent., xxvii, p. 127 (1894).

" " " Bull. Bot. Dep. Jam., p. 257 (1896).

Habitat.—Antigua.

On *Heliotrope*.

1066. *Chionaspis minuta* Green.

Chionaspis minuta Green, Ind. Mus. Notes, iv, p. 3 (1896).

" " " Cocc. Ceylon, pt. ii, p. 128 (1899).

Habitat.—Ceylon.

On *Tetranthera*.

1067. *Chionaspis*(?) *myrthi* (Bouché).

Aspidiotus myrthi Bouché, Stett. Ent. Zeit., xii, p. 112 (1851).

Chionaspis " Sign., Ann. Soc. Ent. Fr., (4), ix, p. 445 (1869).

Habitat.—France.

On *Myrtus communis*.

1068. *Chionaspis natalensis* Mask.

Chionaspis spartinae var. *natalensis* Mask., N. Z. Trans., xxviii, p. 390 (1896).

" *natalensis* Kll., in litt. (1902).

Habitat.—Natal.

On grass.

1069. Chionaspis nerii Newst.

Chionaspis nerii Newst., Ent. Mon. Mag., xxxi, p. 234 (1895).

" " " Tr. Ent. Soc. Lond., p. 96 (1897).

Habitat.—Algeria.

On Nerium oleander; Olea europæa.

1070. Chionaspis nitida Mask.

Chionaspis nitida Mask., N. Z. Trans., xxiv, p. 15 (1891).

Habitat.—Australia.

On Daviesia corymbosa.

1071. Chionaspis ortholobis Comst.

(*Cottonwood scale*.)

Chionaspis ortholobis Comst., Rep. U. S. Dep. Ag., 1880, p. 317 (1881).

" " " 2nd Rep. Dep. Ent. Corn. Univ., p. 105 (1883).

" " Pack., 5th Rep. U. S. Ent. Com., p. 594 (1890).

" " Ckll., Can. Ent., xxvi, p. 189 (1894).

" " Gillette & Baker, Bull. 31, Col. Exp. Sta., p. 129 (1895).

" " Ckll., Bull. 24, N. Mex. Exp. Sta., p. 38 (1897).

" " Osborn, Contr. Ia. Ag. Coll., No. 3, p. 5 (1898).

" " Waldron, Bull. 34, N. Dak. Exp. Sta., p. 302 (1898).

" " Cooley, Spec. Bull. Mass. Exp. Sta., p. 17 (1899).

" " Newell, Bull. 43, Ia. Exp. Sta., p. 154 (1899).

" " Hunter, Kan. Univ. Quar., ix, p. 101 (1900).

" " King, Can. Ent., xxxiv, p. 62 (1902).

Habitat.—Mass.; Ohio; Mo.; Kan.; Neb.; S. Cal.; New Mexico.

On willow; cottonwood; poplar; butternut; honey-locust.

1072. Chionaspis permutans Green. -

Chionaspis permutans Green, Cocc. Ceylon, pt. ii, p. 130 (1899).

Habitat.—Ceylon.

On Antidesma Buniis.

Chionaspis permutans verecunda Green.

Chionaspis permutans var. verecunda Green, Cocc. Ceylon, pt. ii, p. 131 (1899).

Habitat.—Ceylon.

On Antidesma.

1073. Chionaspis pinifoliæ (Fitch).

(*The Pine-leaf scale*.)

Aspidiotus pinifoliæ Fitch, 2nd Rep. Ins. N. Y., p. 488 (1855).

" " " 4th " " " p. 741 (1857).

" " Walsh, Pract. Ent., i, p. 90 (1866).

" (Mytilaspis) pinifoliæ Riley, 3rd Rep. Ins. Mo., p. 92 (1871).

Mytilaspis pinifoliæ LeBaron, 1st Rep. Ins. Ill., p. 83 (1871).

" pinifolii " 2nd " " " p. 161 (1872).

- Mytilaspis pinifoliae* Bessey, Rep. Ia. Ag. Soc., p. 161 (1872).
 " " " " " " " p. 232 (1874-1875).
 " " Sign., Ann. Soc. Ent. Fr., (5), vi, p. 604 (1876).
Aspidiotus " Glover, Rep. U. S. Dep. Ag., p. 43 (1876).
Chionaspis " Comst., " " " " 1880, p. 318 (1881).
Mytilaspis " Pack., Bull. 7, U. S. Ent. Com., p. 218 (1881).
Chionaspis pinifoliae Riley, Am. Nat., xvi, p. 514 (1882).
 " *pinifoliae* Saund., Rep. Ent. Soc. Ont., p. 53 (1884).
 " " Lint., 2nd Rep. Ins. N. Y., p. 184 (1885).
 " *pinifoliae* " 5th " " " " p. 266 (1889).
Mytilaspis pinifoliae Pack., 5th Rep. U. S. Ent. Com., p. 805 (1890).
Chionaspis " Morg., Ent. Mon. Mag., xxviii, p. 14 (1892).
 " " Lint., 9th Rep. Ins. N. Y., p. 376 (1893).
 " " Howard, Bull. 1, T. s., Dep. Ag., pp. 13, 22 (1895).
 " " Comst., Man. Ins., p. 174 (1895).
 " *pinifoliae* Gillette & Baker, Bull. 31, Col. Exp. Sta., p. 129 (1895).
 " " Lint., 11th Rep. Ins. N. Y., p. 203 (1896).
 " " Ckll., Bull. 24, N. Mex. Exp. Sta., p. 38 (1896).
 " *pinifoliae* Osborn, Pr. Ia. Ac. Sci., v, p. 224 (1898).
 " " Gillette, Bull. 47, Col. Exp. Sta., p. 36 (1898).
 " *pinifoliae* Pettit, Bull. 160, Mich. Exp. Sta., p. 415 (1898).
 " *pinifoliae* Newell, Bull. 43, Ia. Exp. Sta., p. 157 (1899).
 " " Marlatt, Bull. 20, n. s., Dep. Ag., p. 75 (1899).
 " " Cooley, Spec. Bull. Mass. Exp. Sta., p. 30 (1899).
 " " Lugger, 6th Rep. Ent. Minn. Exp. Sta., p. 239 (1900).
 Habitat.—Canada; United States.
 On pine; spruce; other coniferous trees.

***Chionaspis pinifoliae semiaurea* Ckll.**

- Chionaspis pinifoliae* var. *semiaurea* Ckll., Am. Nat., xxix, p. 731 (1895).
 Habitat.—United States.

***Chionaspis pinifoliae heterophyllae* Cooley.**

- Chionaspis pinifoliae heterophyllae* Cooley, Can. Ent., xxix, p. 281 (1897).
 " " " " " Spec. Bull. Mass. Exp. Sta., p. 34 (1899).
 Habitat.—Rhode Island; Florida.
 On *Pinus heterophylla*; *P. sylvestris*; *P. mitis*.

1074. *Chionaspis planchonii* Sign.

- Chionaspis planchonii* Sign., Ann. Soc. Ent. Fr., (4), ix, p. 446 (1869).
 " " Comst., 2nd Rep. Dep. Ent. Corn. Univ., p. 109 (1883).
 Habitat.—Southern Europe.
 On *Quercus ilex*.

1075. *Chionaspis platani* Cooley.

Chionaspis platani Cooley, Spec. Bull. Mass. Exp. Sta., p. 36 (1899).

" " Hunter, Kan. Univ. Quar., ix, p. 103 (1900).

" " Kuw., Pr. Cal. Ac. Sci., (3), iii, p. 77 (1902).

Habitat.—Kansas; Japan.

On sycamore; *Rhus*.

1076. *Chionaspis polygoni* Green.

Chionaspis polygoni Green, Cocc. Ceylon, pt. ii, p. 134 (1899).

Habitat.—Ceylon.

On *Polygonum chinense*.

1077. *Chionaspis quercus* Comst.

Chionaspis quercus Comst., Rep. U. S. Dep. Ag., 1880, p. 319 (1881).

" " " 2nd Rep. Dep. Ent. Corn. Univ., p. 105 (1883).

" " Pack., 5th Rep. U. S. Ent. Com., p. 103 (1890).

" " Newst., Ent. Mon. Mag., xxxi, p. 234 (1895).

" " de Charm., Pr. Soc. Amic. Scien., p. 30 (1899).

Habitat.—California; New Mexico; Mauritius.

On oak.

1078. *Chionaspis retigera* Ckll.

Chionaspis retigera Ckll., The Entom., xxxiv, p. 249 (1901).

Habitat.—Natal.

" On a native shrub."

1079. *Chionaspis rosæ* Goethe.

Chionaspis rosæ Goethe, Jahrb. Nass. Ver. Nat., No. 37, p. 117 (1884).

" " Karsch, Ent. Nach., xi, p. 380 (1885).

Habitat.—Germany.

1080. *Chionaspis sacchari-folii* Zehnt.

Chionaspis sacchari-folii Zehnt., Mede. Proef. Suik., Java, n. s., No. 36, p. 1 (1897).

Habitat.—Java.

On sugar-cane.

1081. *Chionaspis salicis* (Linn.).

(*Willow scale*.)

Coccus salicis Linn., Syst. Nat., Ed. x, i, p. 456 (1758).

" " " Faun. Suec., Ed. ii, p. 265 (1761).

" " " Syst. Nat., Ed. xii, i, p. 741 (1766).

" " Mueller, Faun. Frid., p. 31 (1767).

" " Mod., Act. Goth., i, p. 21 (1778).

" " Gmel., Syst. Nat., Ed. xiii, p. 2218 (1789).

" " De Villers, Syst. Nat., Ed. x, p. 560 (1789).

" " Oliv., Ency. Meth., vi, p. 96 (1791).

" " Schr., Faun. Boica, ii, pt. i, p. 143 (1801).

- Coccus cryptogamus* Dalm., K. Vet. Akad. Handl., p. 357 (1825).
 " " " " " " Extr., x, p. 1, pl. 3, figs. 1-17 (1826).
 " " Harr., N. E. Farm., p. 289 (1829).
 " (*Aspidiotus*) *salicis* Ratz., Forstins., iii, p. 195 (1844).
Aspidiotus salicis Bouché, Stett. Ent. Zeit., v, p. 294 (1844).
Coccus " Macq., Ann. Soc. Ent. Fr., (2), v, p. 47 (1847).
Aspidiotus salicifex Amyot, Monom., p. 480 (1847).
 " *populi* Baer., D'Alton, Zeit. für Zool., p. 167 (1849).
 " *minimus* " " " " " p. 168 (1849).
Coccus salicis Macq., Bull. Soc. Ent. Fr., (2), ix, p. lxxv (1849).
Aspidiotus vaccinii Bouché, Stett. Ent. Zeit., xii, p. 111 (1851).
 " *populi* " " " " " p. 111 (1851).
 " *saliceti* " " " " " p. 111 (1851).
Coccus cryptogamus Harr., Am. Farm. Ency., p. 139 (1858).
Mytilaspis maquarti Targ., Catalogue, p. 44 (1869).
 " *saliceti* " " " p. 44 (1869).
Chionaspis aceris Sign., Ann. Soc. Ent. Fr., (4), ix, p. 442 (1869).
 " *alni* " " " " " " p. 443 (1869).
 " *fraxini* " " " " " " p. 445 (1869).
 " *populi* " " " " " " p. 446 (1869).
 " *salicis* " " " " " " p. 447 (1869).
 " *vaccinii* " " " " " " p. 448 (1869).
Aspidiotus saliceti " " " " " " x, p. 110 (1870).
Lecanium vaccinii Kalt., Die Pflanz., p. 420 (1874).
 " *myrtilli* " " " " p. 420 (1874).
Aspidiotus populi " " " " p. 561 (1874).
 " *saliceti* " " " " p. 587 (1874).
Coccus myrtilli Sign., Ann. Soc. Ent. Fr., (5), vi, p. 620 (1876).
 " *cryptogamus* Vick, Mon. Mag., iv, p. 17 (1881).
Chionaspis fraxini Ormerod, Man. Inj. Ins., Ed. i, p. 176 (1881).
 " *salicis* Loew, Wien. Ent. Zeit., ii, p. 6 (1883).
 " *aceris* Comst., 2nd Rep. Dep. Ent. Corn. Univ., p. 107 (1883).
 " *alni* " " " " " " p. 108 (1883).
 " *populi* " " " " " " p. 109 (1883).
 " *salicis* Targ., Annali di Agr., p. 384 (1884).
 " *vaccinii* Goethe, Jahrb. Nass. Ver. Nat., p. 116 (1884).
 " *populi* Dougl., Ent. Mon. Mag., xxii, p. 247 (1886).
 " *salicis* " " " " " p. 249 (1886).
 " *populi* Mosley, Naturalist's Guide, vi, p. 31 (1890).
 " *fraxini* " " " " " p. 31 (1890).
Coccus cryptogamus Morg., Ent. Mon. Mag., xxvi, p. 43 (1890).
Lecanium vaccinii Dougl. " " " " xxvii, p. 97 (1891).
Chionaspis salicis Morg., " " " " " xxviii, p. 16 (1892).
 " *furfurus* " " " " " p. 16 (1892).
 " *fraxini* " " " " " p. 16 (1892).
 " " Curt., Manifestation of Disease, Forest Trees, p. 33 (1892).

- Chionaspis sorbi* Dougl., Ent. Mon. Mag., xxix, p. 130 (1893).
 “ *salicis* Lint., 9th Rep. Ins. N. Y., p. 411 (1893).
 “ *fraxini* Sign., British Naturalist, p. 23 (1894).
 “ *alni* Ckll., Can. Ent., xxvii, p. 33 (1895).
Aspidiotus fraxini Henschel, Die Schäd. Forst. & Obst. Ins., p. 514 (1895).
 “ *salicis* “ “ “ “ “ “ p. 514 (1895).
Chionaspis “ Reuter, Meddel. Soc. Faun. Flo. Fenn., xxii, p. 21 (1896).
 “ “ Dougl., Notes on Brit. Coccidæ, No. 2, p. 249 (1896).
 “ *vaccinii* Ckll., Bull. 4, T. s., Dep. Ag., p. 54 (1896).
Aspidiotus salicis Eckst., Forstliche Zoologie, p. 558 (1897).
Chionaspis “ Berl. e Leon., Cherm. Ital., Fasc. iii, Nos. 55, 56, 57 (1898).
 “ “ Newell, Contr. Ia. Ag. Coll., No. 3, p. 4 (1898).
 “ “ Cooley, Spec. Bull. Mass. Exp. Sta., p. 11 (1899).
 “ “ Luggier, 6th Rep. Ent. Minn. Exp. Sta., p. 237 (1900).
 “ “ Newst., Jn. Roy. Hor. Soc., xxiii, p. 16 (1900).
 “ “ “ Mon. Brit. Cocc., i, p. 180 (1901).

Habitat.—Europe.

On *Salix hermaphrodita*; *S. alba*; *S. viminalis*; *S. holoserica*; *Populus pyramidoides*; *P. nigra*; *P. tremuloides*; *Alnus communis*; *A. vulgare*; *A. glutinosa*; *Cornus sanguinea*; *Acer pseudoplatanus*; *Vaccinium myrtillus*; *V. vitis-idaea*; *V. uliginosum*; *Tilia parvifolia*; *Sorbus aucuparia*; *Fraxinus excelsior*; *Sarcothamnus scoparius*; *S. vulgaris*.

1082. *Chionaspis salicis=nigræ* (Walsh).

- Aspidiotus salicis-nigræ* Walsh, 1st Rep. Ins. Ill., p. 40 (1868).
Mytilaspis salicis LeBaron (non Linn.), Tr. Ill. Hor. Soc., App., p. 140 (1871).
 “ “ “ 2nd Rep. Ins. Ill., p. 140 (1872).
 ?*Diaspis salicicorticis* Bessey, Ia. Ag. Rep., p. 244 (1874).
Chionaspis salicis Comst., Rep. U. S. Dep. Ag., 1880, p. 320 (1881).
 “ “ Osborn, Tr. Ia. Hor. Soc., xvii, p. 214 (1882).
 “ “ Comst., 2nd Rep. Dep. Ent. Corn. Univ., p. 106 (1883).
 “ “ “ Intr. Ent., p. 151 (1888).
 “ “ Pack., 5th Rep. U. S. Ent. Com., p. 593 (1890).
Mytilaspis “ Forbes, 17th Rep. Ins. Ill., App., p. 23 (1891).
Chionaspis “ Luggier, Bull. 43, Minn. Exp. Sta., p. 224 (1895).
 “ “ “ 1st Ann. Rep. Minn. Exp. Sta., p. 128 (1895).
 “ “ Osborn, Pr. Ia. Ac. Sci., v, p. 224 (1898).
 “ “ “ Contr. Ia. Ag. Coll., No. 3, p. 4 (1898).
 “ *salicis-nigræ* Cooley, Spec. Bull. Mass. Exp. Sta., p. 19 (1899).
 “ “ “ Hunter, Kan. Univ. Quar., ix, p. 101 (1900).
 “ “ “ Quaint. & Scott, Cocc. Amer., Dec. iii-iv, No. 20 (1901).

Habitat.—Can.; Me.; Mass.; N. Y.; Ohio; Ind.; Ill.; Minn.; Ia.; Mo.; Neb.; Kan.; Col.; N. Mex.; Ariz.; Wash.; Cal.

On willow; poplar; tulip-tree; *Cornus stolonifera*; *Amelanchier canadensis*; *Ceanothus*. List in Spec. Bull. Mass. Exp. Sta., p. 21 (1899).

1083. *Chionaspis simplex* Green.

Chionaspis simplex Green, Coccidæ Ceylon, pt. ii, p. 160 (1899).

Habitat.—Ceylon.

On bamboo.

1084. *Chionaspis spartinæ* Comst.

Chionaspis spartinæ Comst., 2nd Rep. Dep. Ent. Corn. Univ., p. 106 (1883).

“ “ Mask., N. Z. Trans., xxvii, p. 51 (1894).

“ “ King, Can. Ent., xxxi, p. 251 (1899).

Habitat.—Mass.; California.

On *Spartina stricta*.

1085. *Chionaspis stanotophri* Cooley.

Chionaspis stanotophri Cooley, Spec. Bull. Mass. Exp. Sta., p. 35 (1899).

Habitat.—Cape Town, S. Africa.

On *Stanotophrum glabrum*.

1086. *Chionaspis striata* Newst.

Chionaspis striata Newst., Tr. Ent. Soc. Lond., p. 96 (1897).

Habitat.—Algeria.

On Cypress.

1087. *Chionaspis tegalensis* Zehnt.

Chionaspis tegalensis Zehnt., Mede. Proef. Suik., Java, (3), No. 6, p. 7 (1898).

“ “ de Charm., Pr. Soc. Amic. Scien., p. 31 (1899).

Habitat.—Java; Mauritius.

1088. *Chionaspis vitis* Green.

Chionaspis vitis Green, Ind. Mus. Notes, iv, p. 3 (1896).

“ “ “ Cocc. Ceylon, pt. ii, p. 140 (1899).

Habitat.—Ceylon; Japan.

On *Vitis lanceolaria*; *Elæagnus latifolia*; *Loranthus*.

1089. *Chionaspis wistariæ* Cooley.

Chionaspis wistariæ Cooley, Can. Ent., xxix, p. 280 (1897).

“ “ “ Spec. Bull. Mass. Exp. Sta., p. 39 (1899).

“ “ Kuw., Pr. Cal. Ac. Sci., (3), iii, p. 77 (1902).

Habitat.—California; Japan.

On *Wistaria* from Japan; *Alnus japonica*; *Salix babylonica*.

1090. *Chionaspis xanthorrhææ* Full.

Chionaspis xanthorrhææ Full., Notes on Cocc. W. Austr., p. 12 (1897).

“ “ “ Tr. Ent. Soc. Lond., p. 472 (1899).

Habitat.—W. Australia.

On *Xanthorrhæa*.

Genus **HOWARDIA** Berl. e Leon. Type, *biclavis*.

Howardia Berl. e Leon., Riv. Pat. Veg., iv, p. 347 (1896).

1091. Howardia biclavis (Comst.).*(The Mining scale.)*

Chionaspis(?) biclavis Comst., 2nd Rep. Dep. Ent. Corn. Univ., p. 98 (1883).

" " " Intr. Ent., p. 153 (1888).

Aspidiotus theæ Green (non Mask.), Ins. Pests, p. 13 (1890) female.

Chionaspis biclavis Craw, Rep. Cal. Bd. Hort., p. 14 (1891).

" " Morg., Ent. Mon. Mag., xxviii, p. 15 (1892).

" " Riley & How., Ins. Life, iv, p. 400 (1892).

Howardia " Berl. e Leon., Riv. Pat. Veg., iv, p. 348 (1896).

Chionaspis " Green, Ind. Mus. Notes, iv, p. 2 (1896).

Howardia " Ckll., Bull. Bot. Dep. Jam., p. 256 (1896).

" " Berl. e Leon., Annali di Agr., p. 127 (1898).

" " Ckll., Jn. N. Y. Ent. Soc., vii, p. 258 (1899).

Chionaspis " de Charm., Pr. Soc. Amic. Scien., p. 30 (1899).

" " Green, Cocc. Ceylon, pt. ii, p. 152 (1899).

" " Newst., Mon. Brit. Cocc., i, p. 190 (1901).

Habitat.—Washington, D. C.; Ohio; Cal.; Mex.; West Indies; Tahiti; Ceylon; Japan; Hawaiian Islands; Mauritius; England; Ireland (in conservatories).

On orange; lime; coffee; tea; tamarind; Flacourtia; Cinchona; Ochrea sapoti; Bixa orellana; Ficus laurifolia; Anona muricata; Hibiscus aculeatus; Microglossa zeylanica.

Howardia biclavis detecta (Mask.).

Chionaspis biclavis var. detecta Mask., N. Z. Trans., xxvii, p. 49 (1894).

Habitat.—Hawaiian Islands.

Genus **DIASPIS** Costa. Type, calyptroides=echinocacti.

Diaspis Costa, Prospetto nuova Div. Met. Coccus, p. 7 (1828) described but no type named; Faun. del Reg. Nap., Cocciniglie, p. 19 (1835); Sign., Ann. Soc. Ent. Fr., (4), ix, p. 431 (1869); Comst., Rep. U. S. Dep. Ag., 1880, p. 310 (1881); 2nd Rep. Dep. Ent. Corn. Univ., p. 85 (1883); Mask., Ins. Nox. Agr. N. Z., p. 45 (1887); Green, Coccidæ Ceylon, pt. i, p. 86 (1896); Newst., Mon. Brit. Cocc., i, p. 151 (1901).

1092. Diaspis arizonica Ckll.

Diaspis arizonicus Ckll., Can. Ent., xxxii, p. 131 (1900).

Habitat.—Arizona.

On Prosopis velutina.

1093. Diaspis australis Hemp.

Diaspis australis Hemp., Rev. Mus. Paul., iv, p. 521 (1900).

" " " Ann. Mag. N. H., (7), viii, p. 109 (1901).

Habitat.—Brazil.

On Myrtaceæ.

1094. *Diaspis baccharidis* Towns. & Ckll.

Diaspis baccharidis Towns. & Ckll., Jn. N. Y. Ent. Soc., vi, p. 179 (1898).

Habitat.—Mexico.

On *Baccharis glutinosa*.

1095. *Diaspis blankenhorni* Targ.

Diaspis blankenhorni Targ., Bull. Soc. Ent. Ital., p. 17 (1879).

“ “ “ “ “ “ “ p. 109 (1885).

Habitat.—Italy.

1096. *Diaspis boisduvalii* Sign.

Diaspis boisduvalii Sign., Ann. Soc. Ent. Fr., (4), ix, p. 432 (1869).

“ “ Mask., N. Z. Trans., xi, p. 200 (1878).

“ “ Comst., 2nd Rep. Dep. Ent. Corn. Univ., p. 86 (1883).

“ “ Mask., N. Z. Trans., xvii, p. 23 (1884).

“ “ “ Ins. Nox. Agr. N. Z., p. 46 (1887).

“ “ Morg., Ent. Mon. Mag., xxvi, p. 44 (1890).

Aulacaspis “ Ckll., Gard. Chron., (3), xiii, p. 548 (1893).

Diaspis “ Mask., N. Z. Trans., xxvii, p. 44 (1894).

Aulacaspis “ Ckll., Bull. Bot. Dep. Jam., p. 107 (1897).

“ “ Hemp., Rev. Mus. Paul., iv, p. 518 (1900).

Diaspis “ Newst., Jn. Roy. Hor. Soc., xxiii, p. 8 (1900).

“ “ “ Mon. Brit. Cocc., i, p. 153 (1901).

Habitat.—Europe (in hot houses); New Zealand; Australia; Hawaiian Islands; Brazil; West Indies; Mexico. In greenhouses, Canada; Mass.; New York; Washington, D. C.; Ohio.

On palms; Acacia; *Cattleya*; wattle; various hothouse plants.

***Diaspis boisduvalii coccois* Licht.**

Diaspis coccois Licht., Bull. Soc. Ent. Fr., (6), ii, p. xxxvi (1882).

Aulacaspis “ Ckll., Pr. Ac. N. Sci. Ph., p. 273 (1899).

Diaspis tentaculatus Morg., Ent. Mon. Mag., xxix, p. 41 (1893).

Habitat.—France; Jamaica.

On cocoanut-palm.

***Diaspis boisduvalii maculata* (Ckll.).**

Aulacaspis boisduvalii var. *maculata* Ckll., Rev. Mus. Paul., iii, p. 502 (1898).

“ “ “ “ “ “ “ iv, p. 518 (1900).

Diaspis “ “ “ “ Ckll., The Entom., xxxv, p. 59 (1902).

Habitat.—Brazil; Antigua.

On pineapple.

1097. *Diaspis bromeliæ* (Kern.).

Coccus bromeliæ Kern., Naturg. Coccus *bromeliæ*, pp. 20, 52 (1778).

“ “ Koll., Inj. Ins., p. 178 (1840).

Chermes “ Bdv., Ent. Hort., p. 334 (1867).

Diaspis “ Sign., Ann. Soc. Ent. Fr., (4), ix, p. 434 (1869).

“ “ Comst., 2nd Rep. Dep. Ent. Corn. Univ., p. 89 (1883).

Aulacaspis bromeliæ Ckll., Can. Ent., xxvi, p. 33 (1894).

“ “ “ “ “ xxxi, p. 227 (1899).

Diaspis “ Newst., Jn. Roy. Hor. Soc., xxiii, p. 8 (1900).

“ “ “ Mon. Brit. Cocc., i, p. 156 (1901).

Habitat.—Europe (in hot houses); Mass.; Washington, D. C.; Ohio and Cal. (in greenhouses); Mexico.

On *Bromelia pinguin*; pineapple; *Hibiscus*; *Canna*; ivy; *Billbergia zebrina*; *Olea fragrans*.

1098. *Diaspis carueli* Targ.

(*Juniper scale*.)

Diaspis carueli Targ., Catalogue, p. 43 (1869).

“ “ Sign., Ann. Soc. Ent. Fr., (4), ix, p. 436 (1869).

“ “ Comst., Rep. U. S. Dep. Ag., 1880, p. 310 (1881).

“ “ Pack., 5th Rep. U. S. Ent. Com., p. 915 (1890).

“ “ Howard, Ins. Life, vii, p. 360 (1895).

“ “ Berl. e Leon., Cherm. Ital., Fasc. i, No. 15 (1895).

“ “ Newst., Jn. Roy. Hor. Soc., xxiii, p. 10 (1900).

“ “ “ Mon. Brit. Cocc., i, p. 162 (1901).

Habitat.—Italy; England; Mass.; New York; Washington, D. C.

On *Juniper*; *arbor-vitæ*.

1099. *Diaspis cattleyæ* (Ckll.).

Aulacaspis cymbidii McIntire, Jn. Quekett Micr. Club, pl. xxvi (1888) no desc.

“ *cattleyæ* Ckll., Biol. Centr. Amer., ii, pt. 2, p. 30 (1899).

Diaspis “ “ The Entom., xxxv, p. 59 (1902).

Habitat.—Mexico; California.

On *Cattleya*.

1100. *Diaspis celtidis* Ckll.

Diaspis celtidis Ckll., Can. Ent., xxxi, p. 106 (1899).

Habitat.—Texas.

On *Celtis*.

1101. *Diaspis chilensis* Ckll.

Diaspis chilensis Ckll., Actes Soc. Sci. Chili, (5), i, p. 6 (1895).

Habitat.—Chili.

1102. *Diaspis colvei* Penzig.

Diaspis colvei Penzig, Studi Bot. sug. Agr., p. 497 (1887).

Habitat.—Italy.

1103. *Diaspis echinocacti* (Bouché).

Aspidiotus echinocacti Bouché, Schäd. Gart. Ins., p. 53 (1833).

“ “ “ Naturg. Ins., p. 15 (1834).

“ “ “ Burm., Handb. Ent., ii, p. 68 (1835).

Diaspis calyptroides Costa, Faun. Reg. Nap., Cocc., p. 20 (1835).

Aspidiotus echinocacti Koll., Inj. Ins., p. 180 (1840).

“ “ Först., “Ueber Schildlause,” p. 562 (1851).

Diaspis calyptroides Targ., Studii sul. Cocc., pp. 13, 14, 21, 27, 45 (1867).

“ “ Sign., Ann. Soc. Ent. Fr., (4), ix, pp. 99, 434 (1869).

“ “ Comst., 2nd Rep. Dep. Ent. Corn. Univ., pp. 93, 95 (1883).

“ “ Mask., N. Z. Trans., xxix, p. 298 (1897).

“ “ Newst., Ent. Mon. Mag., xxxiii, p. 75 (1897).

“ “ “ Tr. Ent. Soc. Lond., p. 94 (1897).

“ “ “ Mon. Brit. Cocc., i, p. 159 (1901).

Habitat.—Europe; India; Algeria; Porto Rico; Mexico; New Mexico; New York.

On *Opuntia ficus-indica*; *Echinocactus ottonis*; *E. tenuispinus*, etc.

***Diaspis echinocacti cacti* Comst.**

Diaspis cacti Comst., 2nd Rep. Dep. Ent. Corn. Univ., p. 91 (1883).

“ “ Ckll., Can. Ent., xxv, p. 127 (1894).

“ “ Lugger, Bull. 43, Minn. Exp. Sta., p. 225 (1895).

“ “ “ Rep. Minn. Exp. Sta., p. 129 (1895).

“ “ Davis, Spec. Bull. 2, Mich. Exp. Sta., p. 37 (1896).

“ “ Ckll., Bull. Bot. Dep. Jam., p. 258 (1896).

“ *calyptroides* var. *cacti* Mask., N. Z. Trans., xxix, p. 299 (1897).

“ “ “ Osborn, Contr. Ia. Ag. Coll., p. 5 (1898).

“ “ “ “ Rolfs & Quaint., Cocc. Amer., Dec. i-ii, No. 14 (1898).

“ “ “ “ Barlow, Ind. Mus. Notes, iv, p. 211 (1899).

“ “ *cacti* de Charm., Pr. Soc. Amic. Scien., p. 29 (1899).

“ *cacti* Lugger, 6th Rep. Minn. Exp. Sta., p. 235 (1900).

“ “ Hemp., Rev. Mus. Paul., iv, p. 520 (1900).

Habitat.—Mass. and N. Y. (in greenhouses); Ia.; Ariz.; New Mexico; Brazil; India; Mauritius.

On *Cactus*; *Cereus giganteus*; *C. macrogonus*; *Echinocactus*.

***Diaspis echinocacti opuntiae* Ckll.**

Diaspis calyptroides var. *opuntiae* Ckll., Jn. Inst. Jam., i, p. 256 (1893).

“ *opuntiae* Newst., Ent. Mon. Mag., xxix, p. 188 (1893).

“ *opunticola* “ “ “ “ “ p. 281 (1893).

“ *calyptroides* var. *opuntiae* Mask., N. Z. Trans., xxix, p. 299 (1897).

“ “ “ “ Ckll. & Parr., The Industrialist, p. 277 (1899).

Habitat.—Demerara; Texas; Mexico; Jamaica.

On *Opuntia arborescens*; *O. elongata*.

1104. *Diaspis euphoriae* de Charm.

Diaspis euphoriae de Charm., Pr. Soc. Amic. Scien., p. 28 (1899).

Habitat.—Mauritius.

On *Nephelium longana*.

1105. *Diaspis gennadii* Leon.

Diaspis gennadii Leon., Riv. Pat. Veg., vi, p. 273 (1898).

Habitat.—Greece.

On *Pistacia terebinthus*.

1106. *Diaspis juniperi* (Bouché).

Aspidiotus juniperi Bouché, Stett. Ent. Zeit., xii, p. 112 (1851).

“ “ Targ., Catalogue, p. 43 (1869).

Diaspis “ Sign., Ann. Soc. Ent. Fr., (4), ix, p. 437 (1869).

“ “ Comst., 2nd Rep. Dep. Ent. Corn. Univ., p. 96 (1883).

Habitat.—Europe.

On *Juniperus communis*.

1107. *Diaspis leperii* Sign.

Diaspis leperii Sign., Ann. Soc. Ent. Fr., (4), ix, p. 437 (1869).

“ “ Comst., 2nd Rep. Dep. Ent. Corn. Univ., p. 96 (1883).

“ “ Goethe, Jahrb. Nass. Ver. Nat., p. 115 (1884).

Habitat.—Europe.

On peach.

1108. *Diaspis minima* Targ.

Diaspis minima Targ., Catalogue, p. 43 (1869).

“ “ Sign., Ann. Soc. Ent. Fr., (4), ix, p. 438 (1869).

“ “ Comst., 2nd Rep. Dep. Ent. Corn. Univ., p. 96 (1883).

“ “ King, Can. Ent., xxxiv, p. 61 (1902).

Habitat.—Europe; Mass. (Harvard Bot. Gardens).

On arbor-vitæ.

1109. *Diaspis miranda* (Ckll.).

Aulacaspis miranda Ckll., Ann. Mag. N. H., (7), i, p. 437 (1898).

Diaspis “ “ The Entom., xxxv, p. 59 (1902).

Habitat.—Mexico.

On “Cherimoya:” “Zapote.”

1110. *Diaspis*(?) *monserrati* Colvée.

Diaspis monserrati Colvée, Estud. sob. alg. Ins., Cocc., p. 21 (1881).

“ “ Targ., Annali di Agr., p. 391 (1884).

Habitat.—Spain.

On *Corynocarpus*?

“This species may belong to *Parlatoria*.”

1111. *Diaspis montana* (Ckll.).

Aulacaspis montana Ckll., Can. Ent., xxviii, p. 226 (1896).

Diaspis “ “ in litt. (1902).

Habitat.—New Mexico.

On *Quercus wrightii*.

1112. *Diaspis oleæ* Colvée.

Diaspis oleæ Colvée, "Gac. Agr. del Minist. de Fomento," xiv, No. 2, p. 39 (1880).

" " " Estud. sob. alg. Ins., Cocc., p. 13, fig. 1 (1881).

" " Targ., Annali di Agr., p. 390 (1884).

Habitat.—Spain.

On olive.

1113. *Diaspis phoradendri* Ckll.

Diaspis phoradendri Ckll., Ann. Mag. N. H., (7), i, p. 437 (1898).

Habitat.—Mexico.

On mistletoe.

1114. *Diaspis pyri* Colvée.

Diaspis pyri Colvée, Estud. sob. alg. Ins., Cocc., p. 33 (1881).

" " " Bull. Soc. Ent. Fr., (6), i, p. li (1881).

" " Ckll., Bull. 6, T. s., Dep. Ag., p. 4, note (1897).

Habitat.—Spain.

On pear; apple.

1115. *Diaspis santali* Mask.

Diaspis santali Mask., N. Z. Trans., xvi, p. 122 (1883).

" " " " " xvii, p. 23 (1884).

" " " Ins. Nox. Agr. N. Z., p. 47 (1887).

" " " N. Z. Trans., xxii, p. 135 (1892).

Habitat.—New Zealand.

On *Santalum cunninghamii*; pear; plum and other fruit trees.

1116. *Diaspis texensis* (Ckll.).

Aulacaspis texensis Ckll., Can. Ent., xxviii, p. 83 (1896).

Diaspis texensis Ckll., in litt. (1902).

Habitat.—Texas.

On *Sophora secundiflora* (both sides of leaves).

1117. *Diaspis toumeyii* Ckll.

Diaspis toumeyii Ckll., Psyche, vii, Suppl., i, p. 4 (1895).

Habitat.—Arizona.

On *Holacantha Emoryi*.

1118. *Diaspis townsendi* Ckll.

Diaspis townsendi Ckll., Biol. Centr. Amer., ii, pt. 2, p. 28 (1899).

Habitat.—Mexico.

On *Prosopis*.

1119. *Diaspis trinacis* Colvée.

Diaspis trinacis Colvée, Estud. sob. alg. Ins., Cocc., p. 19 (1881).

Habitat.—Spain.

On *Trinax*; *Strelitzia Reginae*.

1120. *Diaspis visci* (Schr.).

- Coccus visci Schr., Enum. Ins. Austr., pp. 296, 588 (1871).
 Aspidiotus visci Loew, Verh. z. b. Ges., Wien, xii, p. 110 (1862).
 Diaspis " " " " " " xxii, p. 273 (1872).
 Aspidiotus " Kalt., Die Pflanz., pp. 293, 785 (1874).
 Diaspis " " " " " p. 785 (1874).
 Aspidiotus " Sign., Ann. Soc. Ent. Fr., (5), vi, p. 603 (1876).
 Diaspis " Comst., 2nd Rep. Dep. Ent. Corn. Univ., p. 96 (1883).
 Habitat.—Europe.
 On mistletoe (*Viscum album*).

1121. *Diaspis zamiae* Morg.

- Diaspis zamiae* Morg., Ent. Mon. Mag., xxvi, p. 44 (1890).
Howardia elegans Berl. e Leon., Cherm. Ital., Fasc. i, No. 18 (1895).
 " " " " Riv. Pat. Veg., iv, p. 348 (1896).
Aulacaspis " King, Psyche, viii, p. 350 (1899).
 " " " Can. Ent., xxi, p. 228 (1899).
Diaspis zamiae Newst., Mon. Brit. Cocc., i, p. 165 (1901).
 " " Ckll., The Entom., xxxv, p. 59 (1902).
 Habitat.—England; Portugal; Italy; Bermuda?; New York: Mass. (in
 greenhouses).
 On *Zamia villosa*; *Z. integrifolia*; *Cycas revoluta*.

Genus **AULACASPIS** Ckl. Type, *rosæ*.

- Aulacaspis* Ckll., Journ. Inst. Jam., i, p. 180 (1893); Newst., Mon. Brit. Coc-
cidæ, i, p. 167 (1901); Ckll., The Entom., xxxv, p. 58 (1902).

1122. *Aulacaspis crawii* (Ckll.).

- Diaspis crawii* Ckll., Psyche, viii, p. 190 (1898).
 " " Kuw., Pr. Cal. Ac. Sci., (3), iii, p. 73 (1902).
Aulacaspis crawii Ckll., The Entom., xxxv, p. 59 (1902).
 Habitat.—California from China; Japan.
 On *Elæagnus umbellata*.

Aulacaspis crawii fulleri (Ckll.).

- Diaspis crawii* var. *fulleri* Ckll., The Entom., xxxiv, p. 225 (1901).
Habitat.—Natal.
On *Melia Azedarach*.

1123. *Aulacaspis fagrææ* (Green).

- Diaspis fagrææ* Green, Cocc. Ceylon, pt. i, p. 91 (1896).
Aulacaspis " Ckll., The Entom., xxxv, p. 59 (1902).
 Habitat.—Ceylon.
 On *Fagræa zeylanica*.

1124. Aulacaspis loranthi (Green).

Diaspis loranthi Green, Jn. Bomb. N. H. Soc., xiii, p. 225 (1900).

Aulacaspis " Ckll., The Entom., xxxv, p. 59 (1902).

Habitat.—Ceylon.

On *Loranthus tomentosus*.

1125. Aulacaspis pentagona (Targ.).

(*West Indian Peach scale*.)

Diaspis pentagona Targ., *Revista di Bacchicoltura*, No. 11 (1885).

" " " Bull. Soc. Ent. Ital., xix, p. 184 (1887).

" amygdali Tryon, Rep. on Fungous Pests, p. 89 (1889).

" pentagona Targ., Bull. Soc. Ent. Ital., xxi, p. 57 (1890).

" " Riley & How., Ins. Life, iii, p. 196 (1891).

" " Franc., Boll. di Notiz. Agr., xiii (1891-92).

" lanatus Morg. & Ckll., Journ. Inst. Jam., i, p. 137 (1892).

" " Towns., " " " " pp. 283, 378 (1893).

" pentagona Franc., La gen. autun. del Dias. pentagona (1893).

" " " Atti del Istituto Ven. Sci., (7), iv, p. 1011 (1893).

" lanatus Ckll., Ins. Life, v, p. 247 (1893).

" " Howard, Can. Ent., xxvi, p. 355 (1894).

" " Riley & How., Ins. Life, vi, p. 287 (1894).

" " Mask., N. Z. Trans., xxvii, p. 45 (1894).

" " Ckll., Jn. Trin. Nat. Club, i, p. 307 (1894).

?*Chionaspis prunicola* Mask., N. Z. Trans., xxvii, p. 49 (1894).

Diaspis patelliformis Sasaki, Bull. Agr. Coll. Tokio, p. 107 (1894).

" amygdali Riley & How., Ins. Life, vi, p. 290 (1894).

" " Mask., N. Z. Trans., xxvii, pp. 5, 44 (1894).

" " Ckll., Can. Ent., xxvii, p. 260 (1895).

" " " Rep. N. Mex. Exp. Sta., p. 3 (1895).

" " " Ent. News, vi, p. 123 (1895).

" pentagona Berl. e Leon., Cherm. Ital., Fasc. i, No. 16 (1895).

" lanatus Ckll., Ent. News, vi, p. 123 (1895).

" " Lounsb., Rep. Ent. Cape Good Hope, 1895, p. 48 (1896).

" " Craw, 5th Bien. Rep. Cal. Bd. Hort., p. 39 (1896).

" lanata Green, Ind. Mus. Notes, iv, p. 4 (1896).

" pentagona Berl., Riv. Pat. Veg., iv, p. 382 (1896).

" amygdali Ckll., Bull. Bot. Dep. Jam., p. 257 (1896).

" " " Bull. 4, T. s., Dep. Ag., p. 40 (1896).

" " Lounsb., Rep. Ent. Cape Good Hope, p. 76 (1896).

" " Green, Cocc. Ceylon, pt. i, p. 87 (1896).

" " Craw, 5th Bien. Rep. Cal. Bd. Hort., p. 38 (1896).

" patelliformis Craw, 5th Bien. Rep. Cal. Bd. Hort., p. 39 (1896).

" " Green, Cocc. Ceylon, pt. i, p. 87 (1896).

" amygdali Mask., Ent. Mon. Mag., xxxiii, p. 241 (1897).

" lanatus Starnes, Bull. 36, Ga. Exp. Sta., p. 25 (1897).

Diaspis amygdali Berl. e Leon., Ann. di Agr., p. 121 (1898).

" " Webst. & Mally, Bull. 96, Ohio Exp. Sta., p. 22 (1898).

" " Webster, Can. Ent., xxx, pp. 78, 169 (1898).

" " Cooley, " " " p. 232 (1898).

?*Chionaspis prunicola* Berl. e Leon., Annali di Agr., p. 123 (1898).

Diaspis pentagona Ckll., Pr. Ac. N. Sci. Ph., p. 275 (1899).

" amygdali Webster, Can. Ent., xxxi, p. 130 (1899).

" " de Charm., Pr. Soc. Amic. Scien., p. 29 (1899).

" " Scott, Bull. 1, Ga. St. Bd. Ent., p. 16 (1899).

" " " " 20, n. s., Dep. Ag., p. 84 (1899).

" " Newst., Jn. Roy. Hor. Soc., xxiii, p. 12 (1900).

" pentagona Hemp., Rev. Mus. Paul., iv, p. 519 (1900).

" " Quaint. & Scott, Cocc. Amer., Dec. iii-iv, No. 14 (1901).

" " Newst., Mon. Brit. Cocc., i, p. 173 (1901).

" amygdali Lefroy, Scale Ins. Less. Antil., p. 57 (1901).

" " Zimm., Bull. Inst. Bot. Buitenzorg, No. 10, p. 12 (1901).

" " Full., 1st Rep. Ent. Natal, p. 102 (1901).

" pentagona Kuw., Pr. Cal. Ac. Sci., (3), iii, p. 72 (1902).

" " Banks, Bull. 34, n. s., Dep. Ag., p. 21 (1902).

?*Howardia prunicola* Kirkaldy, Fauna Haw., iii, pt. 2, p. 112 (1902).

Habitat.—England: Switzerland: Italy: New Zealand: Ceylon: Australia: Hawaiian Islands: Japan: China: South Africa: Mauritius: Brazil: West Indies: Panama: Mass.: Washington, D. C.: Ohio: Ga.: Fla.: Cal.

On peach; plum; prune: cherry: apricot; walnut; grape; persimmon; geranium; Hibiscus; etc. Full list of food plants in Can. Ent., xxx, p. 79; Bull. Bot. Dep. Jam., p. 257 (1896).

***Aulacaspis pentagona auranticolor* (Ckll.).**

Diaspis auranticolor Ckll., Can. Ent., xxxi, p. 106 (1899).

Aulacaspis pentagona auranticolor Ckll., in litt. (1902).

Habitat.—California.

On *Osmanthus illicifolia* from Japan.

***Aulacaspis pentagona rubra* (Mask.).**

Diaspis amygdali var. *rubra* Mask., N. Z. Trans., xxx, p. 228 (1898).

Habitat.—Japan; Ceylon.

On *Orixa japonica*: *Loranthus*.

***Aulacaspis pentagona theæ* (Mask.).**

?*Chionaspis prunicola* var. *theæ* Mask., N. Z. Trans., xxviii, p. 389 (1896).

" " " " Green, Ind. Mus. Notes, v, p. 12 (1900).

Habitat.—Northern India.

On tea.

1126. *Aulacaspis persimilis* (Ckll.).

Diaspis persimilis Ckll., Can. Ent., xxix, p. 267 (1897).

Aulacaspis " " The Entom., xxxv, p. 59 (1902).

Habitat.—Mexico.

On "Chico Sapote."

1127. *Aulacaspis rosæ* (Bouché).*(The Rose scale.)*

- Aspidiotus rosæ* Bouché, *Naturg. Ins.*, p. 14 (1834).
 “ “ *Burm., Handb. Ent.*, ii, p. 68 (1835).
 “ “ *Blanch., Hist. Nat. Ins.*, iii, p. 214 (1840).
Diaspis “ *Sign., Ann. Soc. Ent. Fr.*, (4), ix, p. 441 (1869).
Aspidiotus “ *Kalt., Die Pflanz.*, p. 224 (1874).
Diaspis “ *Mask., N. Z. Trans.*, xi, p. 201 (1878).
Aspidiotus “ *Vick., Mon. Mag.*, ii, p. 146 (1879).
Diaspis “ *Comst., Rep. U. S. Dep. Ag.*, 1880, p. 312 (1881).
 “ “ *Goethe, Jahrb. Nass. Ver. Nat.*, p. 116 (1884).
 “ “ *Mask., Ins. Nox. Agr. N. Z.*, p. 47 (1887).
 “ “ *Dougl., Ent. Mon. Mag.*, xxiv, p. 23 (1887).
 “ “ *Comst., Intr. Ent.*, p. 151 (1888).
 “ “ *Morg., Ent. Mon. Mag.*, xxvi, p. 44 (1890).
 “ “ *Riley & How., Ins. Life*, iv, p. 213 (1891).
 “ “ *Webster, Bull. 45, Ohio Exp. Sta.*, p. 208 (1893).
 “ “ *Morg., Bull. 28, La. Exp. Sta.*, p. 994 (1893).
 “ “ *Riley & How., Ins. Life*, v, p. 207 (1893).
 “ “ *Howard, Ins. Life*, vi, p. 233 (1894).
 “ “ *Hopkins, Rep. W. Va. Exp. Sta.*, p. 533 (1894).
 “ “ *Smith, Rep. N. J. Exp. Sta.*, 1894, p. 499 (1895).
 “ “ *Green, Ent. Mon. Mag.*, xxxi, p. 229 (1895).
 “ “ *Berl. e Leon., Cherm. Ital., Fasc. i, No. 7* (1895).
 “ “ *Davis, Spec. Bull. 2, Mich. Exp. Sta.*, p. 36 (1896).
Aulacaspis “ *Ckll., Bull. Bot. Dep. Jam.*, p. 259 (1896).
Diaspis “ *Chambliss, Bull. 4, Tenn. Exp. Sta.*, p. 147 (1896).
Aulacaspis “ *Frog., Rep. Dep. Ag. N. S. W.*, No. 175, p. 7 (1897).
 “ “ *Johns., Bull. 22, Md. Exp. Sta.*, p. 273 (1898).
 “ “ *Osborn, Contr. Ia. Ag. Coll.*, p. 5 (1898).
Diaspis “ *Lucet, Ins. Nuis. Ross., France*, p. 312 (1898).
Aulacaspis “ *Newell, Bull. 43, Ia. Exp. Sta.*, p. 158 (1899).
Diaspis “ *Lugger, 6th Rep. Minn. Exp. Sta.*, p. 235 (1900).
 “ “ *(Aulacaspis) rosæ Newst., Jn. Roy. Hor. Soc.*, xxiii, p. 10 (1900).
Aulacaspis (Diaspis) “ “ *Mon. Brit. Cocc.*, i, p. 168 (1901).
 “ *rosæ Forbes, Circ. 36, Ill. Exp. Sta.*, p. 24 (1901).
 “ “ *Kuw., Pr. Cal. Ac. Sci.*, (3), iii, p. 73 (1902).
 “ “ *Banks, Bull. 34, n. s., Dep. Ag.*, p. 23 (1902).
Diaspis “ *Smith, “ 159, N. J. Exp. Sta.* (1902).
 “ “ *Forbes, 22nd Rep. Ins. Ill.*, p. 120 (1903).

Habitat.—Europe; Japan; Australia; New Zealand; Hawaiian Islands; Demerara; China; Fiji; Chili; West Indies; Mexico; Can.: N. Y.: Fla.: Ohio; Cal.

On rose; raspberry; strawberry; blackberry; myrtle; pear; *Ailanthus*; *Cycas*; mango, etc.

Aulacaspis rosæ spinosa Mask.

Aulacaspis rosæ var. *spinosa* Mask., Ent. Mon. Mag., xxxiii, p. 241 (1897).

Diaspis " " " " N. Z. Trans., xxx, p. 228 (1898).

Habitat.—Japan.

On *Smilax*.

Genus **PHENACASPIS** Cooley & Ckll. Type, *nyssæ*.

Phenacaspis Cooley & Ckll., Check List Coccidæ, Suppl., p. 398, note (1899):

Cooley, Can. Ent., xxxv, p. 48 (1903).

1128. Phenacaspis aucubæ (Cooley).

Chionaspis aucubæ Cooley, Can. Ent., xxix, p. 279 (1897).

Phenacaspis " " in litt. (1902).

Habitat.—California (at quarantine from Japan).

On *Aucuba*.

1129. Phenacaspis chinensis (Ckll.).

Chionaspis chinensis Ckll., 5th Bien. Rep. Cal. Bd. Hort., p. 37 (1896).

" " Mask., N. Z. Trans., xxx, p. 231 (1898).

Phenacaspis " Ckll., Check List, Suppl., p. 398, note (1899).

" " Cooley, Can. Ent., xxxv, p. 48 (1903).

Habitat.—California (at quarantine from China); Japan.

On *Quercus*.

1130. Phenacaspis cockerelli (Cooley).

Chionaspis cockerelli Cooley, Can. Ent., xxix, p. 278 (1897).

Phenacaspis " " in litt. (1902).

Habitat.—California (at quarantine from China).

On palm.

1131. Phenacaspis dilatata (Green).

Chionaspis dilatata Green, Cocc. Ceylon, pt. ii, p. 148 (1899).

" " Zimm., Bull. Inst. Bot. Buitenzorg, No. 10, pp. 19, 22 (1901).

Phenacaspis " Cooley, in litt. (1902).

Habitat.—Ceylon.

On *Eurycles*; *Myristica moschata*; *M. laurifolia*; mango.

1132. Phenacaspis dubia (Mask.).

Chionaspis dubia Mask., N. Z. Trans., xiv, p. 216 (1881).

" " " Ins. Nox. Ag. N. Z., p. 54 (1887).

" " " N. Z. Trans., xxiii, p. 8 (1890).

Phenacaspis " Cooley, in litt. (1902).

Habitat.—New Zealand.

On *Coprosma*; *Pellæa*; *Rubus*; *Asplenium*.

1133. *Phenacaspis eugeniæ* (Mask.).

Chionaspis eugeniæ Mask., N. Z. Trans., xxiv, p. 14 (1891).

" " " " " xxv, p. 211 (1892).

" " " " " xxix, p. 306 (1897).

Phenacaspis " Ckll., Check List, Suppl., p. 398 (1899).

Chionaspis " Full., Tr. Ent. Soc. Lond., p. 472 (1899).

Howardia " Kirkaldy, Fauna Haw., iii, pt. 2, p. 112 (1902).

Phenacaspis " Cooley, Can. Ent., xxxv, p. 48 (1903).

Habitat.—Australia; China; Japan; Ceylon; Hawaiian Islands.

On *Eugenia elliptica*; *Ricinus communis*; *Eucalyptus*; *Viburnum*; *Leptospermum lævigatum*; *Melaleuca ericifolia*; palms.

1134. *Phenacaspis flava* (Green).

Chionaspis flava Green, Cocc. Ceylon, pt. ii, p. 150 (1899).

Phenacaspis " Cooley, in litt. (1902).

Habitat.—Ceylon.

On *Antidesma Bunius*.

1135. *Phenacaspis latissima* (Ckll.).

Chionaspis latissima Ckll., "California Fruit Grower," p. 45 (1897).

" " Cooley, Can. Ent., xxix, p. 282 (1897).

Phenacaspis " " in litt. (1902).

Habitat.—California; Japan.

On *Distylium racemosum* from Japan.

1136. *Phenacaspis litzeæ* (Green).

Chionaspis eugeniæ var. *litzeæ* Green, Ind. Mus. Notes, iv, p. 3 (1896).

" *litzeæ* Green, Cocc. Ceylon, pt. ii, p. 144 (1899).

Phenacaspis " Cooley, in litt. (1902).

Habitat.—Ceylon.

On *Litsea zeylanica*.

1137. *Phenacaspis lounsburyi* (Cooley).

Chionaspis lounsburyi Cooley, Can. Ent., xxx, p. 87 (1898).

Phenacaspis " " in litt. (1902).

Habitat.—Cape Colony, S. Africa.

1138. *Phenacaspis megaloba* (Green).

Chionaspis megaloba Green, Cocc. Ceylon, pt. ii, p. 149 (1899).

Phenacaspis " Cooley, in litt. (1902).

Habitat.—Ceylon.

On *Psidium*; *Actinodaphne molochina*.

1139. *Phenacaspis natalensis* Ckll.

Phenacaspis natalensis Ckll., Ann. Mag. N. H., (7), ix, p. 25 (1902).

Habitat.—Natal.

On mango.

1140. Phenacaspis nyssæ (Comst.).

(Sour-gum scale.)

Chionaspis nyssæ Comst., Rep. U. S. Dep. Ag., 1880, p. 316 (1881).

" " Pack., 5th Rep. U. S. Ent. Com., p. 659 (1890).

Phenacaspis " Ckll., Check List, Suppl., p. 398 (1899).

Chionaspis " Quaint. & Scott, Cocc. Amer., Dec. iii-iv, No. 19 (1901).

Phenacaspis " Cooley, Can. Ent., xxxv, p. 48 (1903).

Habitat.—North Carolina; Georgia.

On "Sour-gum."

1141. Phenacaspis varicosa (Green).

Chionaspis eugeniæ var. varicosa Green, Ind. Mus. Notes, iv, p. 2 (1896).

" varicosa Green, Cocc. Ceylon, pt. ii, p. 146 (1899).

Phenacaspis " Cooley, in litt. (1902).

Habitat.—Ceylon.

On *Gelonium lanceolatum*.**1142. Phenacaspis xerotidis** (Mask.).

Chionaspis xerotidis Mask., N. Z. Trans., xxvii, p. 50 (1894).

Phenacaspis " Cooley, in litt. (1902).

Habitat.—Australia.

On *Xerotes longifolia*.Genus **HEMICHIONASPIS** Ckll. Type, aspidistræ.s. g. *Hemichionaspis* Ckll., Am. Nat., xxxi, p. 592 (1897): g. Cooley, Spec.

Bull. Mass. Exp. Sta., p. 44 (1899): Ckll., Check List, Suppl., p. 397

(1899); Bull. Soc. Ent. Fr., lxxi, p. 81 (1902).

1143. Hemichionaspis aspidistræ (Sign.).

Chionaspis aspidistræ Sign., Ann. Soc. Ent. Fr., (4), ix, p. 443 (1869).

" brasiliensis " " " " " " " p. 444 (1869).

" " Comst., 2nd Rep. Dep. Ent. Corn. Univ., p. 109 (1883).

" aspidistræ Mask., N. Z. Trans., xxiv, p. 15 (1891).

" " Cotes, Ind. Mus. Notes, ii, No. 1, p. 17 (1891).

" brasiliensis Mask., N. Z. Trans., xxv, p. 210 (1892).

" " " " " " " " xxvi, p. 68 (1893).

" " Ckll., Jn. Trin. Nat. Club, i, p. 306 (1894).

" " Cotes, Ind. Mus. Notes, iii, No. 5, p. 52 (1894).

" aspidistræ Ckll., Pr. U. S. Nat. Mus., xvii, p. 620 (1895).

" " Newst., Ent. Mon. Mag., xxxii, p. 60 (1896).

" " Mask., " " " " " " " " p. 223 (1896).

" " Craw, 5th Bien. Rep. Cal. Bd. Hort., p. 35 (1896).

" brasiliensis Ckll., Bull. Bot. Dep. Jam., p. 257 (1896).

" " Green, Ind. Mus. Notes, iv, p. 2 (1896).

" " Newst., Ent. Mon. Mag., xxxii, p. 60 (1896).

" " Mask., " " " " " " " " p. 223 (1896).

- Chionaspis latus* Ckll., *Psyche*, vii, Suppl., i, p. 21 (1896).
 “ “ “ *Bull.* 4, T. s., Dep. Ag., p. 53 (1896).
 “ *aspidistræ* Mask., *N. Z. Trans.*, xxix, p. 305 (1897).
 “ “ *Green, Ent. Mon. Mag.*, xxxiii, p. 70 (1897).
 “ *braziliensis* Mask., “ “ “ “ p. 242 (1897).
 “ “ *Ckll., Am. Nat.*, xxxi, p. 592 (1897).
 “ *latus* Berl. e Leon., *Annali di Agr.*, p. 124 (1898).
 “ *aspidistræ* *Green, Cocc. Ceylon*, pt. ii, p. 110 (1899).
Hemichionaspis “ *Cooley, Spec. Bull. Mass. Exp. Sta.*, p. 45 (1899).
 “ “ *Hemp., Rev. Mus. Paul.*, iv, p. 516 (1900).
 “ “ *var. braziliensis* *Hemp., Rev. Mus. Paul.*, iv, p. 516 (1900).
Chionaspis “ *Newst., Jn. Roy. Hor. Soc.*, xxiii, p. 17 (1900).
 “ “ *Mon. Brit. Cocc.*, i, p. 187 (1901).
Hemichionaspis “ *King, Can. Ent.*, xxxiv, p. 62 (1902).
 “ “ *Kuw., Pr. Cal. Ac. Sci.*, (3), iii, p. 75 (1902).

Habitat.—France; England; India; Formosa; Japan; Ceylon; Australia; Brazil; Trinidad; Canada (in greenhouses); Mass. (Harvard Bot. Gardens); Washington, D. C.; Cal.

On *Aspidistra lurida*; orchids; ferns; orange; mango; fig; pepper-tree; tea; *Acacia melanoxylon*; *Davallia moorei*; *Cocos plumosa*; *Cyanotus*; *Areca catechu*, etc.

1144. *Hemichionaspis cyanogena* Ckll.

Hemichionaspis cyanogena Ckll., *The Entom.*, xxxiv, p. 226 (1901).

Habitat.—Natal.

1145. *Hemichionaspis dracænæ* Cooley.

Hemichionaspis dracænæ Cooley, *Spec. Bull. Mass. Exp. Sta.*, p. 57 (1899).

Habitat.—Socotra Island.

On *Dracæna cinnabari*.

1146. *Hemichionaspis marchali* Ckll.

Hemichionaspis marchali Ckll., *Bull. Soc. Ent. Fr.*, lxxi, p. 82 (1902).

Habitat.—French Guinea, Africa.

On fruit of oil-palm (Eleis).

1147. *Hemichionaspis minor* (Mask.).

Chionaspis minor Mask., *N. Z. Trans.*, xvii, p. 33 (1884).

“ “ “ *Ins. Nox. Agr. N. Z.*, p. 56 (1887).

“ *timidus* *Riley & How., Ins. Life*, vi, p. 50 (1893) no desc.

“ *angustior* “ “ “ “ “ p. 50 (1893) no desc.

“ *minor* Ckll., *Ann. Mag. N. H.*, (6), xvi, p. 62 (1895).

“ “ “ *Bull. Bot. Dep. Jam.*, p. 257 (1896).

“ “ “ *Cooley, Can. Ent.*, xxx, p. 89 (1898).

“ “ “ *Rolfs & Quaint., Cocc. Amer., Dec. i-ii, No. 13* (1898).

Hemichionaspis minor Cooley, *Spec. Bull. Mass. Exp. Sta.*, p. 52 (1899).

Chionaspis albizziæ *Green, Cocc. Ceylon*, pt. ii, p. 115 (1899).

- Hemichionaspis minor Hemp., Rev. Mus. Paul., iv, p. 517 (1900).
 Chionaspis " Lefroy, Scale Ins. Less. Antil., p. 59 (1901).
 Hemichionaspis " Kuw., Pr. Cal. Ac. Sci., (3), iii, p.75 (1902).

Habitat.—New Zealand; Japan; Ceylon; Brazil; Grenada; Antigua; Jamaica; Panama; Florida.

On Parsonia; Rhipogonum scandens; Hibiscus; Capsicum; Melia Azedarach; Cycas revoluta; cocoa-palm; cotton; pepper; Pelargonium; oleander; orange; Albizzia stipulata; Agave; fig, etc.

Hemichionaspis minor strachani Cooley.

Hemichionaspis minor var. strachani Cooley, Spec. Bull. Mass. Exp. Sta., p. 54 (1899).

" " " " Kuw., Pr. Cal. Ac. Sci., (3), iii, p.75 (1902).

Habitat.—West Africa.

1148. Hemichionaspis mussændæ (Green).

- Chionaspis aspidistræ var. mussændæ Green, Ind. Mus. Notes, iv, p.2 (1896).
 " " " " Mask., Ent. Mon. Mag., xxxii, p.224 (1896).
 " " " " " N. Z. Trans., xxix, p.306 (1897).
 " mussændæ Green, Cocc. Ceylon, pt. ii, p. 117 (1899).

Hemichionaspis " Cooley, Spec. Bull. Mass. Exp. Sta., p. 49 (1899).

Habitat.—Ceylon.

On Mussænda frondosa; Loranthus; Debregeasia.

1149. Hemichionaspis rhododendri (Green).

Chionaspis rhododendri Green, Cocc. Ceylon, pt. ii, p. 119 (1899).

Hemichionaspis " Cooley, Spec. Bull. Mass. Exp. Sta., p. 56 (1899).

Habitat.—Ceylon.

On Rhododendron arboreum.

1150. Hemichionaspis scrobicularum (Green).

Chionaspis scrobicularum Green, Cocc. Ceylon, pt. ii, p. 121 (1899).

Hemichionaspis " Cooley, Spec. Bull. Mass. Exp. Sta., p. 55 (1899).

Habitat.—Ceylon.

On Elæocarpus amœnus.

1151. Hemichionaspis separata (Green).

Chionaspis separata Green, Ind. Mus. Notes, v, No. 1, p. 5 (1900).

Hemichionaspis " Ckll., in litt. (1902).

Habitat.—Darjeeling.

On tea leaves.

1152. Hemichionaspis theæ (Mask.).

Chionaspis theæ Mask., Ind. Mus. Notes, ii, No. 1, p. 60 (1891).

" " " " N. Z. Trans., xxiv, p.14 (1891).

Aspidiotus " " " " xxv, p. 207 (1892).

- Chionaspis theæ Cotes, Ind. Mus. Notes, ii, No. 6, p. 168 (1893).
 “ “ “ “ “ “ iii, No. 1, p. 25 (1893).
 “ “ “ “ “ “ “ No. 4, p. 39 (1894).
 “ “ Ckll., Pr. U. S. Nat. Mus., xvii, p. 620 (1895).
 “ exercitata Green, Ind. Mus. Notes, iv, p. 3 (1896).
 “ aspidistræ var. theæ Mask., N. Z. Trans., xxix, p. 305 (1897).
 “ theæ Green, Cocc. Ceylon, pt. ii, p. 113 (1899).
 Hemichionaspis theæ Cooley, Spec. Bull. Mass. Exp. Sta., p. 51 (1899).
 Habitat.—India: Ceylon.
 On Thea; Psychotria.

Genus **PINNASPIS** Ckll. Type, pandani=buxi.

Pinnaspis Ckll., Journ. Inst. Jam., i, p. 136 (1892).

1153. *Pinnaspis bambusæ* Ckll.

- Pinnaspis bambusæ Ckll., Ent. Mon. Mag., xxix, p. 157 (1893).
 “ “ “ “ Bull. Bot. Dep. Jam., p. 149 (1897).
 Habitat.—Jamaica.
 On bamboo.

1154. *Pinnaspis buxi* (Bouché).

- Aspidiotus buxi Bouché, Stett. Ent. Zeit., xii, p. 111 (1851).
 Mytilaspis “ Sign., Ann. Soc. Ent. Fr., (4), x, p. 93 (1870).
 Aspidiotus “ Kalt., Die Pflanz., p. 526 (1874).
 Mytilaspis pandani Comst., Rep. U. S. Dep. Ag., 1880, p. 324 (1881).
 “ buxi “ 2nd Rep. Dep. Ent. Corn. Univ., p. 121 (1883).
 “ “ Morg., Ent. Mon. Mag., xxvi, p. 229 (1890).
 “ “ Ckll., “ “ “ xxix, p. 38 (1893).
 Pinnaspis pandani “ “ “ “ “ p. 157 (1893).
 “ “ “ Jn. Trin. Nat. Club, i, p. 307 (1894).
 “ “ “ Bull. Bot. Dep. Jam., p. 149 (1897).
 “ “ Berl. e Leon., Cherm. Ital., Fasc. iii. No. 58 (1898).
 “ “ King, Can. Ent., xxxi, p. 229 (1899).
 “ buxi Newst., Mon. Brit. Cocc., i, p. 207 (1901).

Habitat.—Mass.: N. Y.; Jamaica; Trinidad; Panama; Grenada; Europe.
 On Buxus sempervirens; Dictyosperma album; Areca lutescens; cocoa-palm; Pandanus conoideus; Anthurium cristallinum; Thrinax excelsa; Dracæna.

Pinnaspis buxi alba Ckll.

- Pinnaspis pandani var. alba Ckll., Jn. Trin. Nat. Club, i, p. 307 (1894).
 Habitat.—Trinidad.
 On palm.

Genus **POLIASPIS** Mask. Type, media.

Poliaspis Mask., N. Z. Trans., xii, p. 293 (1879): Comst., 2nd Rep. Dep. Ent. Corn. Univ., p. 126 (1883): Mask., Ins. Nox. Agr. N. Z., p. 56 (1887): Full., Tr. Ent. Soc. Lond., p. 470 (1899): Newst., Mon. Brit. Cocc., i, p. 176 (1901).

1155. *Poliaspis carissæ* Ckll.

Poliaspis carissæ Ckll., The Entom., xxxv, p. 112 (1902).
Habitat.—Natal.
On *Carissa*.

1156. *Poliaspis casuarinæ* Lidg.

Poliaspis casuarinæ Lidg., The Wombat, iv, p. 14 (1898).
Habitat.—Victoria, Australia.
On *Casuarina suberosa*.

1157. *Poliaspis cycadis* Comst.

Poliaspis cycadis Comst., 2nd Rep. Dep. Ent. Corn. Univ., p. 126 (1883).
“ “ Dougl., Ent. Mon. Mag., xxiv, p. 22 (1887).
“ “ Newst., Mon. Brit. Cocc., i, p. 177 (1901).
Habitat.—Washington, D. C.; Great Britain.
On *Cycas revoluta*; *Dion edule*; palms.

1158. *Poliaspis exocarpi* Mask.

Poliaspis exocarpi Mask., N. Z. Trans., xxiv, p. 17 (1891).
“ “ “ “ “ xxvi, p. 72 (1893).
“ “ “ “ “ xxvii, p. 52 (1894).
“ “ “ “ “ xxviii, p. 391 (1896).
“ “ “ “ “ xxix, p. 306 (1897).

Habitat.—Australia.

On *Exocarpus cupressiformis*; *Santalum*; *Leptospermum*; *Oxylobium trilobatum*; *Dillwynia ericifolia*.

1159. *Poliaspis intermedia* Full.

Poliaspis intermedia Full., Notes on Cocc. W. Austr., p. 5 (1897).
“ “ “ “ “ Tr. Ent. Soc. Lond., p. 470 (1899).
Habitat.—W. Australia.
On “ a leguminous plant.”

1160. *Poliaspis media* Mask.

Poliaspis media Mask., N. Z. Trans., xii, p. 293 (1879).
“ “ Comst., 2nd Rep. Dep. Ent. Corn. Univ., p. 128 (1883).
“ “ Mask., Ins. Nox. Agr. N. Z., p. 57 (1887).
Habitat.—New Zealand.
On *Veronica*; *Leucopogon Fraseri*; *Cyathodes acerosa*; *ferus*.

1161. Poliaspis nitens Full.

Poliaspis nitens Full., Notes on Cocc. W. Austr., p. 5 (1897).

" " " Tr. Ent. Soc. Lond., p. 470 (1899).

Habitat.—W. Australia.

On *Daviesia*.

1162. Poliaspis pini Mask.

Poliaspis pini Mask., Ent. Mon. Mag., xxxiii, p. 242 (1897).

" " " N. Z. Trans., xxx, p. 231 (1898).

" " Kuw., Pr. Cal. Ac. Sci., (3), iii, p. 82 (1902).

Habitat.—Japan.

On *Pinus densiflora*; *P. austriaca*; *P. thunbergii*; *Abies firma*; *A. bicolor*; *Torreya nucifera*; *Podocarpus chinensis*.

Genus **LEUCASPIS** Targ. Type, *candida*=*pini*.

Leucaspis Targ., Catalogue, p. 41 (1869): Sign., Ann. Soc. Ent. Fr., (4), x, p.

100 (1870): Comst., 2nd Rep. Dep. Ent. Corn. Univ., p. 129 (1883): Mask.,

N. Z. Trans., xxv, p. 209 (1892).

1163. Leucaspis bambusæ Kuwana.

Leucaspis bambusæ Kuw., Pr. Cal. Ac. Sci., (3), iii, p. 74 (1902).

Habitat.—Japan.

On bamboo.

1164. Leucaspis cordylinidis Mask.

Leucaspis cordylinidis Mask., N. Z. Trans., xxv, p. 209 (1892).

Habitat.—Australia.

On *Cordyline*.

1165. Leucaspis epidaurica Genn.

Leucaspis epidaurica Genn., Ann. Soc. Ent. Fr., (6), iii, p. 31 (1883).

Habitat.—Greece.

On olive.

1166. Leucaspis japonica Ckll.

Leucaspis japonica Ckll., Psyche, viii, p. 53 (1897).

" " Craw, Rep. Cal. Bd. Hort., p. 111 (1897-98).

Habitat.—California; Japan.

On broom (from Japan); apple; maple; *Magnolia*; *Pæonia*.

1167. Leucaspis loewi Colvée.

Leucaspis loewi Colvée, Nuevos Estud. sob. alg. Cocc., p. 10 (1882).

" " Loew., Wien. Ent. Zeit., ii, p. 43 (1883).

Habitat.—Valencia.

On pine.

1168. Leucaspis pini (Hartig).

- Coccus pini Hartig, Jahresb. u. d. Forstwiss., p. 642 (1839).
 Aspidiotus flavus " " " " p. 642 (1839) female.
 " pini Bouché, Stett. Ent. Zeit., xii, p. 111 (1851).
 Leucaspis candida Targ., Catalogue, p. 41 (1869).
 " pini Sign., Ann. Soc. Ent. Fr., (4), x, p. 102 (1870).
 Aspidiotus flavus " " " " " " " p. 108 (1870).
 Coccus pini Riley, 5th Rep. Ins. Mo., p. 98 (1873).
 Leucaspis pini Sign., Bull. Soc. Ent. Fr., (6), ii, p. clxxxiv (1882).
 Aspidiotus flavus " " " " " " " p. clxxxiv (1882).
 Leucaspis pini Loew, Wien. Ent. Zeit., i, p. 273 (1882).
 " " " " " " " ii, p. 5 (1883).
 " " Comst., 2nd Rep. Dep. Ent. Corn. Univ., p. 129 (1883).
 " " Witlaczil, Zur Morph. Anat. Cocc., p. 158 (1885).
 " " " Zeit. f. Wiss. Zool., xliii, p. 149 (1886).
 Aspidiotus " Eckst., Die Kiefer, i, p. 32 (1893).
 Leucaspis " Newst., Ent. Mon. Mag., xxx, p. 181 (1894).
 " " Saccardo, Riv. Pat. Veg., iv, p. 52 (1895).
 " " Berl. e Leon., Cherm. Ital., Fasc. i, No. 19 (1895).
 Aspidiotus " Eckst., Forst. Zool., p. 558 (1897).
 Habitat.—Europe.
 On pine.

1169. Leucaspis pusilla Loew.

- Leucaspis pusilla Loew, Wien. Ent. Zeit., ii, p. 3 (1883).
 Habitat.—Austria.
 On Pinus sylvestris.

1170. Leucaspis signoreti Targ.

- Leucaspis signoreti Targ., Catalogue, p. 42 (1869).
 " " Sign., Ann. Soc. Ent. Fr., (4), x, p. 100 (1870).
 " " " Bull. " " " (6), ii, p. clxxxv (1882).
 " " Comst., 2nd Rep. Dep. Ent. Corn. Univ., p. 129 (1883).
 Habitat.—Europe.
 On pine.

Genus **SYNGENASPIS** Sulc. Type, parlatoriae.

Syngenaspis Sulc, Sitzb. K. Bohm. Ges. Wiss., No. xlix, pp. 2, 15 (1895).

1171. Syngenaspis parlatoriae Sulc.

- Syngenaspis parlatoriae Sulc, Sitzb. K. Bohm. Ges. Wiss., No. xlix, pp. 3, 15 (1895).
 Habitat.—Europe.

Genus **FIORINIA** Targ. Type pellucida=fioriniæ.

- Fiorinia Targ., Catalogue, p. 42 (1869): Sign., Ann. Soc. Ent. Fr., (4), ix, p. 449 (1869): Comst., Rep. U. S. Dep. Ag., 1880, p. 328 (1881): Mask., Ins. Nox. Agr. N. Z., p. 57 (1887): Green, Coccidæ Ceylon, pt. i, p. 93 (1896): Newst., Mon. Brit. Cocc., i, p. 133 (1901).
Uhleria Comst., 2nd Rep. Dep. Ent. Corn. Univ., p. 110 (1883).

1172. Fiorinia acaciæ Mask.

- Fiorinia acaciæ Mask., N. Z. Trans., xxiv, p. 16 (1891).
" " Frog., Ag. Gaz. N. S. W., July, p. 19 (1902).
Habitat.—New Zealand; Australia.
On Acacia pycnantha.

Fiorinia acaciæ bilobis Full.

- Fiorinia acaciæ var. bilobis Full., Notes on Cocc. W. Austr., p. 5 (1897).
" " " " " Tr. Ent. Soc. Lond., p. 472 (1899).
Habitat.—W. Australia.
On Acacia pulchella.

1173. Fiorinia alæodendri de Charm.

- Fiorinia alæodendri de Charm., Pr. Soc. Amic. Scien., p. 36 (1899).
Habitat.—Mauritius.

1174. Fiorinia bambusæ Mask.

- Fiorinia bambusæ Mask., Ent. Mon. Mag., xxxiii, p. 242 (1897).
" " " " " N. Z. Trans., xxx, p. 233 (1898).
Habitat.—China.
On Bambusa fortunei.

1175. Fiorinia casuarinæ Mask.

- Fiorinia casuarinæ Mask., N. Z. Trans., xxix, p. 307 (1897).
Habitat.—Australia.
On Casuarina.

1176. Fiorinia cockerelli de Charm.

- Fiorinia cockerelli de Charm., Pr. Soc. Amic. Scien., p. 33 (1899).
Habitat.—Mauritius.

1177. Fiorinia expansa Mask.

- Fiorinia expansa Mask., N. Z. Trans., xxvii, p. 51 (1894).
" " " " " xxviii, p. 391 (1896).
Habitat.—Australia.
On Melaleuca linariifolia.

1178. Fiorinia fioriniæ (Targ.).

- Diaspis fioriniæ Targ., Studii sul. Cocc., p. 14 (1867).
Chermes arecæ Bdv., Insectologie Agricole, p. 262 (1868).

- Fiorinia pellucida* Targ., Catalogue, p. 42 (1869).
 " " Sign., Ann. Soc. Ent. Fr., (4), ix, p. 449 (1869).
 " *camelliæ* Comst., Rep. U. S. Dep. Ag., 1880, p. 329 (1881).
Uhleria fioriniæ " 2nd Rep. Dep. Ent. Conn. Univ., p. 111 (1883).
 " *camelliæ* " " " " " " " p. 111 (1883).
Fiorinia pellucida Morg., Ent. Mon. Mag., xxv, p. 46 (1888).
Uhleria camelliæ " " " " p. 46 (1888).
Fiorinia " Riley, Ins. Life, i, p. 377 (1889).
 " *pellucida* " " " " p. 355 (1889).
 " *camelliæ* Mask., N. Z. Trans., xxiv, p. 16 (1891).
 " " " " " xxv, p. 211 (1892).
Uhleria fioriniæ Morg., Ent. Mon. Mag., xxviii, p. 12 (1892).
Fiorinia " Ckll., " " " " xxix, p. 39 (1893).
 " *camelliæ* Morg., Bull. 28, La. Exp. Sta., p. 995 (1893).
 " *fioriniæ* Ckll., Can Ent., xxvi, p. 33 (1894).
 " *camelliæ* Berl. e Leon., Cherm. Ital., Fasc. i, No. 25 (1895).
 " *fioriniæ* var. *camelliæ* Ckll., Check List, p. 337 (1896).
Uhleria camelliæ Davis, Spec. Bull. 2, Mich. Exp. Sta., p. 38 (1896).
Fiorinia fioriniæ Green, Cocc. Ceylon, pt. i, p. 94 (1896).
 " *palmæ* " Ind. Mus. Notes, iv, p. 5 (1896).
 " *fioriniæ* Ckil., Bull. Bot. Dep. Jam., p. 149 (1897).
 " *pinicola* Mask., Ent. Mon. Mag., xxxiii, p. 242 (1897).
 " *fioriniæ* var. *camelliæ* Rolfs & Quaint., Cocc., Amer., Dec. i-ii, No. 6 (1898).
 " " de Charm., Pr. Soc. Amic. Scien., p. 37 (1899).
 " " Green, Jn. Bomb. N. H. Soc., xiii, p. 256 (1900).
 " " Hemp., Rev. Mus. Paul., iv, p. 509 (1900).
 " " Newst., Jn. Roy. Hor. Soc., xxiii, p. 17 (1900).
 " " " Mon. Brit. Cocc., i, p. 134 (1901).
 " *pellucida* Kirkaldy, Faun. Haw., iii, pt. 2, p. 112 (1902).
 Habitat.—Europe; Australia; Ceylon; Hawaiian Islands; Mauritius;
 China; Brazil; Jamaica; Barbados; Mexico; Mass.; Md.; Washington,
 D. C. (in greenhouses); La.; Col.; Cal.
 On coccoanut-palm; *Camellia*; *Areca aurea*; *Cycas revoluta*; *Anthurium*
acaule; *Phytelephas macrocarpa*; *Kentia Balmoreana*; *Hedera helix*; *Lep-*
tospermum; *Ficus*; *Livistona*; *Podocarpus*; *Cupressus*; tea; ferns, etc.

Fiorinia fioriniæ japonica Kuw.

Fiorinia floriniae var. *japonica* Kuw., Pr. Cal. Ac. Sci., (3), 111, p. 79 (1902).

Habitat.—Japan.

On *Podocarpus chinensis*; *Pinus*.

Fiorinia fioriniæ minor Mask.

Fiorinia camelliae var. *minor* Mask., N. Z. Trans., xxix, p. 307 (1897).

“ “ “ “ “ Ent. Mon. Mag., xxxiii, p. 242 (1897).

Habitat.—Amoy; Formosa; Australia.

On Camellia; Ficus; palms.

1179. Fiorinia gigas (Mask.).

Diaspis gigas Mask., N. Z. Trans., xi, p. 201 (1878).

“ “ “ “ “ xiv, p. 217 (1881).

Uhlaria “ Comst., 2nd Rep. Dep. Ent. Corn. Univ., p. 111 (1883).

Diaspis “ Mask., N. Z. Trans., xvii, p. 24 (1884).

Fiorinia asteliæ “ Ins. Nox. Agr. N. Z., p. 58 (1887).

“ *gigas* “ N. Z. Trans., xxii, p. 137 (1889).

Habitat.—New Zealand.

On *Atherosperma Novæ Zælandiæ*; *Astelia cunninghamii*; *Coprosma*; *Pittosporum eugenioides*.

1180. Fiorinia grossulariæ Mask.

Fiorinia grossulariæ Mask., N. Z. Trans., xvi, p. 123 (1883).

“ “ “ Ins. Nox. Agr. N. Z., p. 59 (1887).

Habitat.—New Zealand.

On gooseberry.

1181. Fiorinia kewensis Newst.

Fiorinia kewensis Newst., Ent. Mon. Mag., xxxvii, p. 82 (1901).

“ “ “ Mon. Brit. Cocc., i, p. 137 (1901).

Habitat.—Royal Gardens, Kew, England.

On *Howea forsteriana*.

1182. Fiorinia lidgetti Green.

Fiorinia lidgetti Green, Victorian Naturalist, xv, p. 10 (1900).

Habitat.—Australia.

1183. Fiorinia minima Mask.

Fiorinia minima Mask., N. Z. Trans., xvi, p. 122 (1883).

“ “ “ Ins. Nox. Agr. N. Z., p. 59 (1887).

Habitat.—New Zealand.

On *Brachyglottis repanda*; *Panax arboreum*.

1184. Fiorinia nephelii Mask.

Fiorinia nephelii Mask., Ent. Mon. Mag., xxxiii, p. 242 (1897).

“ “ “ N. Z. Trans., xxx, p. 234 (1898).

Habitat.—China; Formosa; Queensland.

On *Nephelium longana*.

1185. Fiorinia proboscidea Green.

Fiorinia proboscidea Green, Jn. Bomb. N. H. Soc., xiii, p. 256 (1900).

Habitat.—Ceylon.

On *Gelonium lanceolatum*.

1186. Fiorinia rubra Mask.

Fiorinia rubra Mask., N. Z. Trans., xxvi, p. 71 (1893).

Habitat.—Australia.

On *Acacia*.

Fiorinia rubra propinqua Mask.

Fiorinia rubra var. *propinqua* Mask., N. Z. Trans., xxix, p. 307 (1897).

Habitat.—Australia.

On *Acacia*.

1187. Fiorinia sapsosmæ Green.

Fiorinia sapsosmæ Green, Ind. Mus. Notes, iv, p. 5 (1896).

“ “ “ Cocc. Ceylon, pt. i, p. 96 (1896).

“ “ “ Jn. Bomb. N. H. Soc., xiii, p. 256 (1900).

Habitat.—Ceylon.

On *Sapsosma*.

Fiorinia sapsosmæ gelonii Green.

Fiorinia sapsosmæ var. *gelonii* Green, Jn. Bomb. N.H.Soc., xiii, p. 256 (1900).

Habitat.—Ceylon.

On *Gelonium lanceolatum*.

1188. Fiorinia scrobicularum Green.

Fiorinia scrobicularum Green, Ind. Mus. Notes, iv, p. 5 (1896).

“ “ “ Cocc. Ceylon, pt. i, p. 100 (1896).

Habitat.—Ceylon.

On *Gærtnera kœnigii*.

1189. Fiorinia secreta Green.

Fiorinia secreta Green, Ind. Mus. Notes, iv, p. 5 (1896).

“ “ “ Cocc. Ceylon, pt. i, p. 102 (1896).

Habitat.—Ceylon.

On *Grewia orientalis*.

1190. Fiorinia signata Mask.

Fiorinia signata Mask., Ent. Mon. Mag., xxxiii, p. 242 (1897).

“ “ “ N. Z. Trans., xxx, p. 231 (1898).

Habitat.—Japan.

On *Bambusa tessellata*.

1191. Fiorinia similis Green.

Fiorinia similis Green, Cocc. Ceylon, pt. i, p. 98 (1896).

Habitat.—Ceylon.

1192. Fiorinia stricta Mask.

Fiorinia stricta Mask., N. Z. Trans., xvi, p. 124 (1883).

“ “ “ “ “ xvii, p. 24 (1884).

“ “ “ Ins. Nox. Agr. N. Z., p. 60 (1887).

“ “ Ckll., Gard. Chron., (3), xiii, p. 548 (1893).

Habitat.—New Zealand.

On *Dendrobium*; *Hedycarpus*; *Phormium tenax*; *Cordyline australis*;
Astelia cunninghamii; *Hoheria angustifolia*.

1193. Fiorinia(?) sulcii Newst.

|| *Leucaspis pini* Morg. (non Hart.), Ent. Mon. Mag., xxviii, p. 13 (1892).

" " Newst., " " " " " xxx, p. 181 (1894).

Fiorinia sulcii " Ent. Mon. Mag., xxx, p. 232 (1894).

Habitat.—Europe.

On pine.

1194. Fiorinia syncarpiae Mask.

Fiorinia syncarpiae Mask., N. Z. Trans., xxv, p. 212 (1892).

Habitat.—Australia.

On *Syncarpia laurifolia*.

1195. Fiorinia tenuis Mask.

Fiorinia tenuis Mask., Ent. Mon. Mag., xxxiii, p. 242 (1897).

" " " N. Z. Trans., xxx, p. 232 (1898).

Habitat.—Japan.

On *Bambusa*.

1196. Fiorinia theæ Green.

Fiorinia theæ Green, Ind. Mus. Notes, v, p. 3 (1900).

Habitat.—India.

On tea-plant.

Genus **EPIDIASPIS** Ckll. Type, *piricola*.

Epidiaspis Ckll., Check List, Coccidæ, Suppl., p. 398 (1899); The Entom., xxxv, p. 59 (1902).

1197. Epidiaspis piricola (Del Guer.).

|| *Diaspis ostreæformis* Sign. (non Curt.), Ann. Soc. Ent. Fr., (4), ix, p. 439 (1869).

" " " " " " " " " (5), vi, p. 603 (1876).

" " Licht., Bull. Soc. Ent. Fr., (6), i, p. li (1881).

" " Sign., " " " " " " " p. lii (1881).

" " Comst., 2nd Rep. Dep. Ent. Corn. Univ., p. 94 (1883).

" " Goethe, Jahrb. Nass. Ver. Nat., pp. 114, 128 (1884).

" " Morg., Ent. Mon. Mag., xxv, p. 119 (1888).

" " " " " " " " " xxvi, p. 42 (1890).

Aspidiotus piricola Del Guer., Il Naturalista Siciliano, p. 142 (1894).

" " *pyricola* Berl., Riv. Pat. Veg., iv, p. 185 (1895).

Diaspis ostreæformis Berl. e Leon., Cherm. Ital., Fasc. i, No. 10 (1895).

Aspidiotus piricola Ckll., Can. Ent., xxvii, p. 260 (1895).

" " Smith J. B., Rep. N. J. Exp. Sta., p. 499 (1896).

Diaspis " Ckll., Bull. 6, T. s., Dep. Ag., p. 4 (1897).

" *fallax* Horvath, Rev. Ent. France, xvi, p. 95 (1897).

? " *snowii* Hunter, Kan. Univ. Quar., viii, p. 14 (1899).

" *piricola* Marlatt, Ent. News, xi, p. 590 (1900).

" *ostreæformis* Felt, Bull. 46, N. Y. St. Mus., p. 359 (1901).

" *fallax* Frank & Kruger, Schildlausbuch, pp. 39, 85 (1901).

" *piricola* Ckll., The Entom., xxxv, p. 59 (1902).

Habitat.—Italy; France; Portugal; Germany; England; New York; California.

On plum: apple; pear; peach; currant.

Genus **ASPIDIOTUS** Bouché. Type, *nerii*=*hederæ*.

Aspidiotus Bouché, *Naturg. Schäd. Gart. Ins.*, p. 52 (1833); *Naturg. Ins.*, p. 9 (1834); *Burm., Handb. Ent.*, ii, p. 66 (1835); *Curt., Gard. Chron.*, iii, p. 804 (1843); *Targ., Mem. Soc. Ital. Sci. Nat.*, No. 3 (1867); *Catalogue*, p. 43 (1869); *Comst., Rep. U. S. Dep. Ag.*, 1880, p. 292 (1881); 2nd *Rep. Dep. Ent. Corn. Univ.*, p. 55 (1883); *Targ., Coccin. deg. Agr. Ital.*, p. 20 (1891); *Green, Coccidæ Ceylon*, pt. i, p. 39 (1896); *Newst., Mon. Brit. Cocc.*, i, p. 80 (1901).

Phaulaspis Leon., *Riv. Pat. Veg.*, v, p. 284 (1897). Type, *hakeæ*.

Chentraspis “ “ “ “ vi, p. 111 (1897). “ *unilobis*.

s. g. *Hemiberlesia* Leon., *Riv. Pat. Veg.*, vi, p. 117 (1897). Type *rapax*.

s. g. *Diaspidiotus* “ “ “ “ “ p. 215 (1898). “ *ancylus*.

s. g. *Aspidiella* “ “ “ “ “ p. 220 (1898). “ *sacchari*.

s. g. *Evaspidiotus* “ “ “ “ “ p. 232 (1898). “ *hederæ*.

s. g. *Cryptoanidia* “ “ “ “ “ viii, p. 323 (1900). “ *hakeæ*.

1198. *Aspidiotus abietis* (Schr.).

Coccus abietis Schr. (non Mod.), *Beitr. z. Naturg.*, p. 48 (1776).

“ *pineti* Schr., *Faun. Boica*, ii, pt. i, p. 146 (1801).

“ *flavus* Hartig, *Jahresb. u. d. Forstwiss.*, i, p. 642 (1839) male.

Aspidiotus “ Sign., *Ann. Soc. Ent. Fr.*, (4), x, p. 108 (1870).

“ *pini* Comst., *Rep. U. S. Dep. Ag.*, 1880, p. 306 (1881).

Coccus abietis Sign., *Bull. Soc. Ent. Fr.*, (6), ii, p. clxxiv (1882).

“ “ Loew, *Wien. Ent. Zeit.*, i, p. 270 (1882).

Aspidiotus abietis Comst., 2nd *Rep. Dep. Ent. Corn. Univ.*, p. 57 (1883).

“ *pini* Targ., *Annali di Agr.* (1884).

“ “ Pack., 5th *Rep. U. S. Ent. Com.*, p. 807 (1890).

“ *abietis* “ “ “ “ “ p. 878 (1890).

“ “ Ckll., *Can. Ent.*, xxvi, p. 190 (1894).

“ *pini* “ “ “ “ “ p. 190 (1894).

“ *abietis* Newst., *Ent. Mon. Mag.*, xxx, p. 179 (1894).

“ “ Ckll., *Bull. 6, T. s.*, *Dep. Ag.*, pp. 10, 18 (1897).

“ “ Leon., *Riv. Pat. Veg.*, vii, p. 67 (1898).

“ “ Smith, *Rep. N. J. St. Bd. Agr.*, p. 12 (1899).

“ “ Leon., *Gen. e Spec. Diaspiti, Asp.*, p. 94 (1900).

“ “ King, *Can. Ent.*, xxiv, p. 61 (1902).

Habitat.—Europe; Maine; Mass.; New York; New Jersey; Georgia.

On hemlock; pine; maple; fir.

1199. *Aspidiotus æsculi* Johnson.

Aspidiotus æsculi Johns., *Bull. Ill. St. Lab. N. H.*, iv, p. 386 (1896).

“ “ “ *Ent. News*, vii, p. 152 (1896).

A. (*Diaspidiotus*) *æsculi* Ckll., Bull. 6, T. s., Dep. Ag., p. 20 (1897).
Aspidiotus æsculi Newell, Contr. Ia. Ag. Coll., No. 3, p. 13 (1899).
Chrysomphalus æsculi Leon., Gen. e Spec. Diaspiti, Asp., p. 225 (1900).

Habitat.—California.

On *Æsculus californica*.

***Aspidiotus æsculi solus* Hunter.**

Aspidiotus æsculi subsp. *solus* Hunter, Kan. Univ. Quar., viii, p. 12 (1899).

“ “ “ “ Newell, Contr. Ia. Ag. Coll., No. 3, p. 13 (1899).

Habitat.—Kansas.

On *Juglans nigra*.

1200. *Aspidiotus ancylus* (Putn.).

?*Aspidiotus circularis* Fitch, 3rd Rep. Ins. N. Y., p. 426 (1856).

? “ “ “ Sign., Ann. Soc. Ent. Fr., (5), vi, p. 601 (1876).

Diaspis ancylus Putn., Tr. Ia. Hor. Soc., xii, p. 321 (1877).

Aspidiotus “ “ Pr. Dav. Ac. N. Sci., ii, p. 346 (1879).

“ “ Comst., Rep. U. S. Dep. Agr., 1880, p. 292 (1881).

“ “ “ 2nd Rep. Dep. Ent. Corn. Univ., p. 58 (1883).

“ “ Pack., 5th Rep. U. S. Ent. Com., p. 553 (1890).

“ “ Ckll., Can. Ent., xxvi, p. 19 (1894).

“ “ “ “ “ xxvii, p. 261 (1895).

“ “ Luggar, Bull. 43, Minn. Exp. Sta., p. 225 (1895).

“ “ Rep. Minn. Exp. Sta., p. 129 (1895).

“ “ Ckll., Bull. 19, N. Mex. Exp. Sta., p. 106 (1896).

“ “ Lint., 11th Rep. Ins. N. Y., p. 275 (1896).

“ “ Fletcher, 28th Rep. Ent. Soc. Ont., p. 87 (1897).

“ *circularis* Ckll., Bull. 6, T. s., Dep. Ag., p. 4, note (1897).

“ (*Diaspidiotus*) *ancylus* Ckll., Bull. 6, T. s., Dep. Ag., pp. 8, 20 (1897).

“ *ancylus* Gillette, Bull. 38, Col. Exp. Sta., p. 36 (1897).

“ “ “ “ “ 47, “ “ “ p. 15 (1898).

“ “ Lowe, Rep. N. Y. Exp. Sta., 1897, p. 458 (1898).

“ “ Johns., Can. Ent., xxx, p. 82 (1898).

“ “ Aldr., Bull. 15, Idaho Exp. Sta., p. 175 (1898).

“ “ Osborn, Contr. Ia. Ag. Coll., p. 6 (1898).

“ (*Diaspidiotus*) *ancylus* Leon., Riv. Pat. Veg., vi, p. 216 (1898).

“ *ancylus* Berl. e Leon., Annali di Agr., p. 108 (1898).

“ “ Pettit, Bull. 160, Mich. Exp. Sta., p. 414 (1898).

“ “ Forbes, 20th Rep. Ins. Ill., p. 16 (1898).

“ “ Reh, Jahrb. Hamb. Wiss. Anst., xvi, pp. 8, 10 (1898).

“ “ Fletcher, 30th Rep. Ent. Soc. Ont., p. 109 (1899).

“ “ Newell, Contr. Ia. Ag. Coll., No. 3, pp. 1, 7 (1899).

“ “ “ Bull. 43, Ia. Ag. Coll., p. 160 (1899).

“ “ Hunter, Kan. Univ. Quar., viii, p. 4 (1899).

“ “ Luggar, 6th Rep. Minn. Exp. Sta., p. 224 (1900).

“ *circularis* Marlatt, Ent. News, xi, p. 590 (1900).

- Aspidiotus ancylus* Quaint. & Scott, Cocc. Amer., Dec. iii-iv, No. 9 (1901).
 " " Frank & Kruger, Schildlausbuch, p. 72 (1901).
 " " Felt, Bull. 46, N. Y. St. Mus., pp. 326, 351 (1901).
 " " Banks, Bull. 34, n. s., Dep. Ag., p. 19 (1902).

Habitat.—Can.; Mass.; N. Y.; N. J.; Del.; Md.; D. C.; Va.; Ga.; Ohio;
 Ill.; Ia.; Minn.; Kan.; Col.; N. Mex.; Wash.; Germany.

On ash; beech; maple; oak; linden; peach; cherry; apple; pear;
 quince; osage orange; hackberry; currant; bladder-nut, etc.

***Aspidiotus ancylus serratus* Newell & Ckll.**

Aspidiotus ancylus var. *serratus* Newell & Ckll., Ia. Ac. Sci., v, p. 229 (1898).

" " " " " Contr. Ia. Ag. Coll., No. 3, p. 8 (1899).

Habitat.—Iowa.

On willow.

***Aspidiotus ancylus latilobis* Newell.**

Aspidiotus ancylus var. *latilobis* Newell, Contr. Ia. Ag. Coll., No. 3, p. 9 (1899).

Habitat.—Iowa.

On mountain-ash.

1201. *Aspidiotus atherospermæ* Mask.

Aspidiotus atherospermæ Mask., N. Z. Trans., xi, p. 198 (1878).

" " Comst., 2nd Rep. Dep. Ent. Corn. Univ., p. 72 (1883).

" " Mask., Ins. Nox. Agr. N. Z., p. 40 (1887).

" " Ckll., Bull. 6, T. s., Dep. Ag., p. 25 (1897).

Habitat.—New Zealand.

On *Atherosperma Novæ Zælandiæ*.

1202. *Aspidiotus bilobis* Mask.

Aspidiotus bilobis Mask., N. Z. Trans., xxx, p. 225 (1898).

Hemiberlesia " Leon., Gen. e Spec. Diaspiti, Asp., p. 221 (1900).

Habitat.—China.

On grass.

1203. *Aspidiotus bossiæ* Mask.

Aspidiotus bossiæ Mask., N. Z. Trans., xxiv, p. 10 (1891).

" " Ckll., Bull. 6, T. s., Dep. Ag., p. 26 (1897).

Hemiberlesia " Leon., Riv. Pat. Veg., vi, p. 122 (1897).

" " " Gen. e Spec. Diaspiti, Asp., p. 21 (1900).

Habitat.—Australia.

On *Bossiæ procumbens*.

1204. *Aspidiotus britannicus* Newst.

|| *Aspidiotus hederæ* Newst. (non Vall.), Ent. Mon. Mag., xxxii, p. 279 (1896).

" *britannicus* Newst., " " " xxxiv, p. 93 (1898).

" " Leon., Gen. e Spec. Diaspiti, Asp., p. 223 (1900).

" " Newst., Journ. Roy. Hor. Soc., xxiii, p. 6 (1900).

" " " Mon. Brit. Cocc., i, p. 117 (1901).

" " King, Can. Ent., xxxiv, p. 61 (1902).

Habitat.—England: Mass.; Oregon.

On holly; *Ruscus hypoglossum*.

1205. *Aspidiotus caldesii* Targ.

Aspidiotus caldesii Targ., Catalogue, p. 43 (1869).

" " Sign., Ann. Soc. Ent. Fr., (4), ix, p. 116 (1869).

" " Comst., 2nd Rep. Dep. Ent. Corn. Univ., p. 73 (1883).

" " Ckll., Bull. 6, T. s., Dep. Ag., p. 18 (1897).

Habitat.—Italy: W. Australia.

On *Daphne collina*: *Acacia*.

1206. *Aspidiotus candidulus* Ckll.

Aspidiotus (*Hemiberlesia*) *candidulus* Ckll., Can. Ent., xxxii, p. 130 (1900).

Habitat.—Arizona.

On *Prosopis velutina*.

1207. *Aspidiotus ceratus* Mask.

Aspidiotus ceratus Mask., N. Z. Trans., xxvii, p. 39 (1894).

" " Ckll., Bull. 6, T. s., Dep. Ag., p. 26 (1897).

Aonidiella cerata Leon., Riv. Pat. Veg., vii, p. 191 (1899).

" " Gen. e Spec. Diaspiti, Asp., p. 146 (1900).

Habitat.—Australia.

On *Acacia stenophylla*: *Templetonia*.

1208. *Aspidiotus chamæropsis* Sign.

Aspidiotus chamæropsis Sign., Ann. Soc. Ent. Fr., (4), ix, p. 118 (1869).

" " Comst., 2nd Rep. Dep. Ent. Corn. Univ., p. 74 (1883).

" " Ckll., Bull. 6, T. s., Dep. Ag., p. 29 (1897).

Habitat.—France?

On *Chamærops australis*.

1209. *Aspidiotus coloratus* Ckll.

Aspidiotus uvæ var. *coloratus* Ckll., Psyche, vi, p. 571 (1893).

" *coloratus* Ckll., The Entom., xxx, p. 14 (1897).

A. (*Diaspidiotus*) *coloratus* Ckll., Bull. 6, T. s., Dep. Ag., p. 20 (1897).

A. (*Evaspidiotus*) " Leon., Riv. Pat. Veg., vii, p. 65 (1898).

Aspidiotus coloratus Newell, Contr. Ia. Ag. Coll., No. 3, p. 11 (1899).

" (*Evaspidiotus*) *coloratus* Leon., Gen. e Spec. Diaspiti, Asp., p. 92 (1900).

Habitat.—New Mexico.

On *Chilopsis*.

1210. *Aspidiotus comstocki* Johnson.

Aspidiotus comstocki Johns., Ent. News, vii, p. 151 (1896).

" " " Bull. Ill. St. Lab. N. H., iv, p. 383 (1896).

A. (*Diaspidiotus*) *comstocki* Ckll., Bull. 6, T. s., Dep. Ag., p. 20 (1897).

Aspidiotus comstocki Newell, Contr. Ia. Ag. Coll., No. 3, p. 22 (1899).

" (*Aspidiella*) *comstocki* Leon., Gen. e Spec. Diaspiti, Asp., p. 222 (1900).

Habitat.—New York; Ohio; Illinois; Iowa.

On maple.

1211. *Aspidiotus coniferarum* Ckll.

Aspidiotus (*Diaspidiotus*) *coniferarum* Ckll., Psyche, viii, p. 201 (1898).

" " *coniferarum* Newell, Contr. Ia. Ag. Coll., p. 21 (1899).

Hemiberlesia " Leon., Gen. e Spec. *Diaspiti*, Asp., p. 221 (1900).

Habitat.—New Mexico.

On *Pinus ponderosa*.

1212. *Aspidiotus corokiæ* Mask.

Aspidiotus corokiæ Mask., N. Z. Trans., xxiii, p. 2 (1890).

" " Ckll., Bull. 6. T. s., Dep. Ag., p. 25 (1897).

" (*Selenaspis*) *corokiæ* Leon., Riv. Pat. Veg., vi, p. 213 (1898).

" " " Gen. e Spec. *Diaspiti*, Asp., p. 39 (1900).

Habitat.—New Zealand.

On *Corokia* *Cotoneaster*.

1213. *Aspidiotus cryptomeriæ* Kuwana.

Aspidiotus cryptomeriæ Kuw., Pr. Cal. Ac. Sci., (3), iii, p. 69 (1902).

Habitat.—Japan.

On *Cryptomeria japonica*.

1214. *Aspidiotus cryptoxanthus* Ckll.

Aspidiotus (*Diaspidiotus*) *cryptoxanthus* Ckll., Psyche, ix, p. 71 (1900).

Habitat.—Japan.

On *Quercus glandulifera*.

1215. *Aspidiotus cupressi* Ckll.

Aspidiotus cupressi Ckll., Ann. Mag. N. H., (7), iii, p. 168 (1899).

" " Newell, Contr. Ia. Ag. Coll., No. 3, p. 30 (1899).

Hemiberlesia " Leon., Gen. e Spec. *Diaspiti*, Asp., p. 221 (1900).

Habitat.—Mexico.

On *Cupressus*.

1216. *Aspidiotus cyanophylli* Sign.

Aspidiotus cyanophylli Sign., Ann. Soc. Ent. Fr., (4), ix, p. 119 (1869).

" " Comst., 2nd Rep. Dep. Ent. Corn. Univ., p. 59 (1883).

" " Ckll., Bull. 6, T. s., Dep. Ag., p. 29 (1897).

" " Ent. Mon. Mag., xxxiv, p. 184 (1898).

" " de Charm., Pr. Soc. Amic. Scien., p. 24 (1899).

" (*Evaspidiotus*) *cyanophylli* Leon., Riv. Pat. Veg., vii, p. 53 (1899).

" " " " Gen. e Spec. *Diaspiti*, Asp., p. 80 (1900).

" *cyanophylli* Hemp., Rev. Mus. Paul., iv, p. 498 (1900).

" " Newst., Mon. Brit. Cocc., i, p. 124 (1901).

Habitat.—Ceylon; Mauritius; Brazil; Mexico; England; France. In greenhouses, Mass.; Washington, D. C.; Ohio.

On *Cyanophyllum* from Venezuela; *Ficus*; *Laurus*; palms; orchids; *Cycas revoluta*; *Ipomœa*; *Pritchardia filifera*; tea; *Cinchona*.

1217. *Aspidiotus cydoniæ* Comst.

- Aspidiotus cydoniæ* Comst., Rep. U. S. Dep. Ag., 1880, p. 295 (1881).
 “ “ Mask., N. Z. Trans., xxiv, p. 13 (1891).
 “ *diffinis* var. *lateralis* Ckll., Can. Ent., xxvi, p. 130 (1894).
 “ *cydoniæ* Green, Cocc. Ceylon, pt. i, p. 62 (1896).
 A. (*Hemiberlesia*) *cydoniæ* Ckll., Bull. 6, T. s., Dep. Ag., pp. 5, 21 (1897).
 A. (*Diaspidiotus*) *greenii* “ “ “ “ “ “ pp. 12, 27 (1897).
Aspidiotus diffinis var. *lateralis* “ “ “ “ “ “ p. 23 (1897).
 “ *cydoniæ* Newst., Ent. Mon. Mag., xxxiii, p. 74 (1897).
 “ “ Ckll., “ “ “ “ xxxiv, p. 185 (1898).
 “ “ Leon., Riv. Pat. Veg., vii, p. 44 (1898).
 “ *greenii* Ckll., Ent. Mon. Mag., xxxiv, p. 184 (1898).
 “ “ Hunter, Kan. Univ. Quar., viii, p. 11 (1899).
 “ *cydoniæ* Newell, Contr. Ia. Ag. Coll., No. 3, p. 31 (1899).
 “ “ Marlatt, Can. Ent., xxxi, p. 211 (1899).
 “ *diffinis* var. *lateralis* Newell, Contr. Ia. Ag. Coll., No. 3, pp. 5, 24 (1899).
 “ (*Evaspidiotus*) *cydoniæ* Leon., Gen. e Spec. Diasp., Asp., p. 71 (1900).
 “ *cydoniæ* Quaint. & Scott, Cocc. Amer., Dec. iii-iv, No. 10 (1901).
 “ “ Ckll., Ann. Mag. N. H., (7), x, p. 471 (1902).

Habitat.—Ga.; Fla.; Tex.; Kan.; New Mexico; Mexico; West Indies; Ceylon; Samoa.

On quince; fig; palms; orange; tea-plant; cactus; *Jasminum*; *Lantana*.

***Aspidiotus cydoniæ tectus* Mask.**

- Aspidiotus cydoniæ* var. *tectus* Mask., Ent. Mon. Mag., xxxiii, p. 240 (1897).
 “ “ “ “ “ “ N. Z. Trans., xxx, p. 224 (1898).
 “ (*Evaspidiotus*) *cydoniæ* var. *tectus* Leon., Gen. e Spec. Diaspiti, Asp., p. 223 (1900).

Habitat.—Hawaiian Islands.

On “Ohia.”

***Aspidiotus cydoniæ punicæ* Ckll.**

- Aspidiotus punicæ* Ckll., Journ. Inst. Jam., i, p. 225 (1893).
 “ “ “ “ “ “ Ent. Mon. Mag., xxix, p. 157 (1893).
 “ “ “ “ “ “ Can. Ent., xxvi, p. 129 (1894).
 A. (*Diaspidiotus*) *punicæ* Ckll., Bull. 6, T. s., Dep. Ag., p. 24 (1897).
 A. (*Evaspidiotus*) “ Leon., Riv. Pat. Veg., vi, p. 235 (1898).
Aspidiotus “ Newell, Contr. Ia. Ag. Coll., No. 3, pp. 2, 24 (1899).
 A. (*Evaspidiotus*) “ Leon., Gen. e Spec. Diaspiti, Asp., p. 63 (1900).

Habitat.—Jamaica; Dominica; New York; Iowa.

On cocoanut; pomegranate.

***Aspidiotus cydoniæ crawii* Ckll.**

- A. (*Hemiberlesia*) *crawii* Ckll., Bull. 6, T. s., Dep. Ag., pp. 5, 23 (1897).
Aspidiotus “ Newell, Contr. Ia. Ag. Coll., No. 3, p. 27 (1899).
 “ “ King, Can. Ent., xxxi, p. 227 (1899).

Habitat.—Mexico; Mass. (in greenhouse).

On grape-vine; ivy.

1218. *Aspidiotus degeneratus* (Leon.).

- Chrysomphalus degeneratus* Leon., Riv. Pat. Veg., iv, p. 345 (1896).
A. (Chrysomphalus) " Ckll., Bull. 6, T. s., Dep. Ag., p. 29 (1897).
Chrysomphalus " Leon., Riv. Pat. Veg., vii, p. 216 (1899).
 " " " Gen. e Spec. Diaspiti, Asp., p. 171 (1900).
 Habitat.—Italy.
 On *Camellia japonica*.

1219. *Aspidiotus destructor* Sign.

- Aspidiotus destructor* Sign., Ann. Soc. Ent. Fr., (4), ix, p. 120 (1869).
 " " Licht., Bull. " " (6), ii, p. xxxvii (1882).
 " " Comst., 2nd Rep. Dep. Ent. Corn. Univ., p. 75 (1883).
 " *transparens* Green, Ins. Pests of Tea Plant, p. 20 (1890).
 " *destructor* Mask., N. Z. Trans., xxiv, p. 12 (1891).
 " " Cotes, Ind. Mus. Notes, ii, No. 6, p. 163 (1893).
 " " " " " " iii, No. 1, p. 66 (1893).
 " *fallax* Ckll., Journ. Inst. Jam., i, p. 225 (1893).
 " *cocotis* Newst., Ent. Mon. Mag., xxix, p. 186 (1893).
 " " Ckll., " " " " xxx, p. 57 (1894).
 " *fallax* " " " " " " p. 57 (1894).
 " *destructor* var. *fallax* Ckll., Ent. News, v, p. 79 (1894).
 " " Ckll., Can. Ent., xxvii, p. 261 (1895).
 " " Mask., N. Z. Trans., xxix, p. 297 (1897).
 " " Ckll., Bull. 6, T. s., Dep. Ag., pp. 10, 29 (1897).
 " (*Evaspidiotus*) *destructor* Leon., Riv. Pat. Veg., vii, p. 62 (1899).
 " " " " " " Gen. e Spec. Diaspiti, Asp., p. 89 (1900).
 " *destructor* Lefroy, Scale Ins. Less. Antil., p. 54 (1901).
 Habitat.—China; Formosa; India; Laccadive Islands; Bourbon Island; Mauritius; Demerara; West Indies; Mexico.
 On palms; mango; banana; nutmeg; *Celtis occidentalis*; *Terminalia Catappa*, etc.

1220. *Aspidiotus diffinis* Newst.

- || *Aspidiotus affinis* Newst., Ent. Mon. Mag., xxix, p. 186 (1893).
 " *diffinis* " " " " " " p. 281 (1893).
Aspidiotus (Diaspidiotus) diffinis Ckll., Bull. 6, T. s., Dep. Ag., pp. 11, 23 (1897).
Hemiberlesia diffinis Leon., Riv. Pat. Veg., vi, p. 132 (1897).
Aspidiotus jatrophae Towns. & Ckll., Jn. N. Y. Ent. Soc., vi, p. 178 (1898).
 " " Newell, Contr. Ia. Ag. Coll., No. 3, p. 23 (1899).
 " *diffinis* Marlatt, Ent. News, xi, p. 425 (1900).
Hemiberlesia " Leon., Gen. e Spec. Diaspiti, Asp., p. 31 (1900).
Aspidiotus jatrophae Marlatt, Ent. News, xi, p. 426 (1900).
 Habitat.—Demerara; Mexico; Washington, D. C.; Canada.
 On basswood; lilac.

Aspidiotus diffinis parrotti Newell.

Aspidiotus jatrophae var. *parrotti* Newell, Contr. Ia. Ag. Coll., No. 3, p. 23 (1899).

Habitat.—Mexico.

On "Barenjeno Chiquito."

1221. Aspidiotus dryandrae Full.

Aspidiotus dryandrae Full., Notes on Cocc. W. Austr., p. 3 (1897).

" " " Tr. Ent. Soc. Lond., p. 465 (1899).

Habitat.—West Australia.

On *Dryandra floribunda*.

1222. Aspidiotus dysoxyli Mask.

Aspidiotus dysoxyli Mask., N. Z. Trans., xi, p. 198 (1878).

" " Comst., 2nd Rep. Dep. Ent. Corn. Univ., p. 76 (1883).

" " Mask., Ins. Nox. Agr. N. Z., p. 43 (1887).

" " Ckll., Bull. 6, T. s., Dep. Ag., p. 25 (1897).

Habitat.—New Zealand.

On *Dysoxylum spectabile*.

1223. Aspidiotus euonymi Targ.

Aspidiotus euonymi Targ., Bull. Soc. Tosc. di Orticoltura, p. 12 (1888).

" " Saccardo, Riv. Pat. Veg., iv, p. 51 (1895).

" " Ckll., Pr. Ac. N. Sci. Ph., p. 274 (1899).

Habitat.—Italy.

On *Euonymus japonica*.

1224. Aspidiotus excisus Green.

Aspidiotus excisus Green, Cocc. Ceylon, pt. i, p. 53 (1896).

" " Ckll., Bull. 6, T. s., Dep. Ag., p. 27 (1897).

" (Evaspidiotus) *excisus* Leon., Riv. Pat. Veg., vii, p. 46 (1899).

" " " " Gen. e Spec. Diaspiti, Asp., p. 73 (1900).

Habitat.—Ceylon.

On *Cyanotis pilosa*.

1225. Aspidiotus extensus Mask.

Aspidiotus extensus Mask., N. Z. Trans., xxvii, p. 41 (1894).

A. (*Chentraspis*) " Ckll., Bull. 6, T. s., Dep. Ag., p. 26 (1897).

Chentraspis " Leon., Riv. Pat. Veg., vi, p. 113 (1898).

" " " Gen. e Spec. Diaspiti, Asp., p. 12 (1900).

Habitat.—Australia.

On *Eucalyptus capitellata*.

1226. Aspidiotus fernaldi Ckll.

Aspidiotus fernaldi Ckll., Ann. Mag. N. H., (7), ii, p. 323 (1898).

" " Newell, Contr. Ia. Ag. Coll., No. 3, p. 18 (1899).

" " King, Can. Ent., xxxi, p. 226 (1899).

Habitat.—Massachusetts.

On *Gleditschia triacanthos*.

Aspidiotus fernaldi albiventer Hunter.

Aspidiotus fernaldi subsp. *albiventer* Hunter, Kan. Univ. Quar., viii, p. 6 (1899).

" " " *cockerelli* Parr., Can. Ent., xxxi, p. 10 (1899).

" " " *albiventer* Newell, Contr. Ia. Ag. Coll., No. 3, p. 19 (1899).

Habitat.—Kansas.

On maple; Juneberry.

Aspidiotus fernaldi hesperius Ckll.

Aspidiotus (*Diaspidiotus*) *Fernaldi hesperius* Ckll., Ann. Mag. N. H., (7), ix, p. 450 (1902).

Habitat.—Arizona.

1227. Aspidiotus fimbriatus (Mask.).

Diaspis(?) *fimbriata* Mask., N. Z. Trans., xxv, p. 208 (1892).

Aspidiotus fimbriatus Ckll., Can. Ent., xxvi, p. 128 (1894).

" " " Bull. 6, T. s., Dep. Ag., p. 26 (1897).

" (*Evaspidiotus*) *fimbriatus* Leon., Riv. Pat. Veg., vii, p. 58 (1899).

" " " " Gen. e Spec. Diaspiti, Asp., p. 85 (1900).

Habitat.—Australia.

On *Eugenia Smithii*.

1228. Aspidiotus fodiens Mask.

Aspidiotus fodiens Mask., N. Z. Trans., xxiv, p. 10 (1891).

A. (Chrysomphalus) fodiens Ckll., Bull. 6, T. s., Dep. Ag., p. 26 (1897).

Chrysomphalus fodiens Leon., Riv. Pat. Veg., vii, p. 198 (1899).

" " " Gen. e Spec. Diaspiti, Asp., p. 153 (1900)

Habitat.—Australia.

On *Acacia*.

1229. Aspidiotus forbesi Johnson.

(*Cherry scale*.)

Aspidiotus forbesi Johns., Ent. News, vii, p. 151 (1896).

" " " Bull. Ill. St. Lab. N. H., iv, p. 380 (1896).

A. (Diaspidiotus) forbesi Ckll., Bull. 6, T. s., Dep. Ag., pp. 5, 21 (1897).

Aspidiotus " Forbes, 20th Rep. Ins. Ill., p. 16 (1898).

" " " Johns., Can. Ent., xxx, p. 82 (1898).

" " " Leon., Riv. Pat. Veg., vi, p. 223 (1898).

" " " Hunter, Kan. Univ. Quar., viii, p. 3 (1899).

" " " Newell, Contr. Ia. Ag. Coll., No. 3, p. 14 (1899).

" " " Ckll., Jn. N. Y. Ent. Soc., vii, p. 258 (1899).

" " " Newell, Bull. 43, Ia. Exp. Sta., p. 162 (1899).

" " " Fletcher, Rep. Ont. Dep. Agr., p. 35 (1900).

" " " " Ent. Soc. Ont., p. 109 (1900).

" (*Aspidiella*) *forbesi* Leon., Gen. e Spec. Diaspiti, Asp., p. 49 (1900).

" *forbesi* Frank & Kruger, Schildlausbuch, p. 74 (1900).

Aspidiotus forbesi Quaint. & Scott, Cocc. Amer., Dec. iii-iv, No. 12 (1901).

" " Felt, Bull. 46, N. Y. St. Mus., pp. 330, 347 (1901).

" " Forbes, Circ. 36, Ill. Exp. Sta., p. 19 (1901).

" " Banks, Bull. 34, n. s., Dep. Ag., p. 19 (1902).

Habitat.—Can.; Nova Scotia; Mass.; N. Y.; N. J.; Md.; W. Va.; Ga.; Fla.; Ala.; Ohio; Ill.; Kan.; New Mexico; Mexico; Porto Rico; Germany.

On plum; peach; pear; apple; quince; cherry; currant; gooseberry; apricot; beech; hawthorn; Jasmine; honey-locust; *Acer pseudoplatanus*; walnut.

1230. *Aspidiotus glanduliferus* Ckll.

Aspidiotus (*Diaspidiotus*) *glanduliferus* Ckll., Ohio Nat., ii, p. 287 (1902).

Habitat.—Ohio.

On *Pinus sylvestris*.

1231. *Aspidiotus hakeæ* Mask.

Aspidiotus hakeæ Mask., N. Z. Trans., xxviii, p. 383 (1896).

A. (*Phaulaspis*) *hakeæ* Ckll., Bull. 6, T. s., Dep. Ag., p. 27 (1897).

Aonidia (*Cryptoaonidia*) *hackeæ* Leon., Gen. e Spec. *Diaspiti*, Asp., p. 206 (1900).

Habitat.—Australia.

On *Hakea*.

1232. *Aspidiotus hartii* Ckll.

Aspidiotus hartii Ckll., Psyche, vii, Suppl., i, p. 7 (1895).

" " " Bull. 6, T. s., Dep. Ag., pp. 10, 24 (1897).

" " " " Bot. Dep. Jam., p. 151 (1897).

" (*Aspidiella*) *hartii* Leon., Riv. Pat. Veg., vi, p. 227 (1898).

" " " " Gen. e Spec. *Diaspiti*, Asp., p. 53 (1900).

Habitat.—West Indies.

On tubers of yam.

Aspidiotus hartii luntii Ckll.

Aspidiotus hartii var. *luntii* Ckll., Scale Ins. Trinidad, p. vii (1895).

" " " " " Bull. 6, T. s., Dep. Ag., p. 24 (1897).

Habitat.—Trinidad.

On tubers of yam.

1233. *Aspidiotus hederæ* (Vall.).

(*Oleander scale*.)

Chermes hederæ Vall., Mem. Acad. Dijon, p. 30 (1829).

? " *capparis* " " " " p. 30 (1829).

Aspidiotus nerii Bouché, Schäd. Gart. Ins., p. 52 (1833).

" " " Naturg. Ins., p. 12 (1834).

" *palmarum* Bouché Naturg. Ins., p. 17 (1834).

Diaspis obliquus Costa, Faun. Reg. Nap., Cocc., p. 21 (1835).

Aspidiotus nerii Burm., Handb. Ent., ii, p. 67 (1835).

" *palmarum* Burm., Handb. Ent., ii, p. 69 (1835).

- Aspidiotus palmarum* Blanch., Hist. Nat. Ins., iii, p. 215 (1840).
 " *nerii* " " " " " iii, p. 215 (1840).
 " " Koll., Inj. Ins., p. 179 (1840).
 " *genistæ* Westw., Synop. Gen. Br. Ins., p. 118 (1840).
 " *epidendri* Bouché, Stett. Ent. Zeit., v, p. 293 (1844).
 " *palmarum* Först., Verh. d. Nat. Ver., viii, p. 562 (1851).
 " *nerii* Curt., Gard. Chron., p. 588 (1863).
 " " Targ., Studii sul. Cocc., pp. 8, 13, 27, 58 (1867).
Chermes ericæ Bdv., Ent. Hort., p. 330 (1867).
 " *aloes* " " " " p. 327 (1867).
 " *epidendri* Bdv., Ent. Hort., p. 339 (1867).
 " *nerii* " " " " p. 340 (1867).
 " *cycadicola* " " " " p. 345 (1867).
Aspidiotus bouchéi Targ., Studii sul. Cocc., p. 1 (1867).
 " *affinis* " Catalogue, p. 43 (1869).
 " " Sign., Ann. Soc. Ent. Fr., (4), ix, p. 114 (1869).
 " *aloes* " " " " " " " p. 114 (1869).
 " *buddleiæ* " " " " " " " p. 115 (1869).
 " *ceratoniae* " " " " " " " p. 118 (1869).
 " *cycadicola* " " " " " " " p. 119 (1869).
 " *denticulatus* " " " " " " " p. 120 (1869).
 " " Targ., Catalogue, p. 43 (1869).
 " *epidendri* Sign., Ann. Soc. Ent. Fr., (4), ix, p. 121 (1869).
 " *ericæ* " " " " " " " p. 121 (1869).
 " *hederæ* " " " " " " " p. 122 (1869).
 " *genistæ* " " " " " " " p. 122 (1869).
 " *gnidii* " " " " " " " p. 122 (1869).
 " *ilicis* " " " " " " " p. 123 (1869).
 " *myricinæ* " " " " " " " p. 125 (1869).
 " *limonii* " " " " " " " p. 125 (1869).
 " *nerii* " " " " " " " p. 126 (1869).
 " *palmarum* " " " " " " " p. 131 (1869).
 " *ulicis* " " " " " " " p. 132 (1869).
 " *villosus* " " " " " " " p. 133 (1869).
 " " Targ., Catalogue, p. 43 (1869).
 " *bouchéi* " " " " p. 43 (1869).
 " *vriesciæ* Sign., Ann. Soc. Ent. Fr., (4), ix, p. 134 (1869).
 " *lentisci* " " " " " (5), vi, p. 601 (1876).
 " *capparidis* " " " " " " " p. 639 (1876).
 " *myrsinæ* " " " " " " " p. 670 (1876).
 " *ulicis* " " " " " " " p. 675 (1876).
 " *epidendri* Mask., N. Z. Trans., xi, p. 197 (1878).
 " *buddleiæ* " " " " " " p. 198 (1878).
 " *oleæ* Colvée, Gac. Agr. del Minist. de Fomento, p. 14 (1880).
 " *nerii* Comst., Rep. U. S. Dep. Ag., 1880, p. 301 (1881).
 " *ceratoniae* Colvée, Estud. sob. alg. Ins., Cocc., p. 16 (1881).
 ? " *corynocarpi* " " " " " " p. 39 (1881).

- Aspidiotus nerii Mask., N. Z. Trans., xiv, p. 217 (1881).
 " bouchei " " " " p. 217 (1881).
 " oleastri Colvée, Nuev. Estud. Cocc., p. 12 (1882).
 " nerii Osborn, Tr. Ia. Hor. Soc., xvii, p. 213 (1882).
 " " Comst., 2nd Rep. Dep. Ent. Corn. Univ., p. 63 (1883).
 " affinis " " " " " " " p. 72 (1883).
 " aloes " " " " " " " p. 72 (1883).
 " budleiaë " " " " " " " p. 73 (1883).
 " ceratoniae " " " " " " " p. 74 (1883).
 " denticulatus " " " " " " " p. 75 (1883).
 " ericaë " " " " " " " p. 76 (1883).
 " hederæ " " " " " " " p. 77 (1883).
 " genistæ " " " " " " " p. 77 (1883).
 " gnidii " " " " " " " p. 77 (1883).
 " ilicis " " " " " " " p. 78 (1883).
 " lentisci " " " " " " " p. 79 (1883).
 " limonii " " " " " " " p. 79 (1883).
 " myrsinæ " " " " " " " p. 79 (1883).
 " palmarum " " " " " " " p. 81 (1883).
 " villosus " " " " " " " p. 83 (1883).
 " vriesciæ " " " " " " " p. 84 (1883).
 " nerii Saund., Ins. Inj. to Fruits, p. 398 (1883).
 " " Targ., Annali di Agr., p. 389 (1884).
 " ceratoniae " " " " " p. 390 (1884).
 ? " corynocarpi " " " " " p. 390 (1884).
 " carpodeti Mask., N. Z. Trans., xvii, p. 17 (1884).
 " nerii Sign., Bull. Soc. Ent. Fr., (6), iv, p. cli (1884).
 " " Hubbard, Ins. Aff. Orange, p. 35 (1885).
 " " Witlaczil, Zur Morph. Anat. Cocc., p. 158 (1885).
 " " Schmidt, Metamorph. Anat. A. nerii (1885).
 " " Karsch, Ent. Nach., xii, p. 110 (1886).
 " epidendri Mask., Ins. Nox. Agr. N. Z., p. 44 (1887).
 " budlæiaë " " " " " p. 40 (1887).
 " carpodeti " " " " " p. 41 (1887).
 " nerii " " " " " p. 44 (1887).
 " " Penzig, Annali di Agr., p. 485 (1887).
 " " Targ., " " " (1888).
 " " Comst., Intr. Ent., p. 151 (1888).
 " " Lint., 5th Rep. Ins. N. Y., pp. 278, 317 (1889).
 " " Coq., Bull. 26, Div. Ent. Dep. Ag., p. 20 (1892).
 " limonii Berl., Riv. Pat. Veg., i, pp. 64, 66 (1892).
 " epidendri Ckll., Gard. Chron., (3), xiii, p. 548 (1893).
 " nerii French, Handb. Destr. Ins. Vict., p. 47 (1893).
 " " Morg., Bull. 28, La. Exp. Sta., p. 996 (1893).
 " hederæ Ckll., Ent. News, v, p. 211 (1894).
 " nerii " " " v, p. 79 (1894).
 " " " " Mon. Mag., xxx, p. 57 (1894).

- Aspidiotus nerii* Riley & How., *Ins. Life*, vi, p. 327 (1894).
 " " Ckll., *Jn. Trin. Nat. Club*, ii, p. 307 (1895).
 " " Lint., *Bull. N. Y. St. Mus.*, p. 271 (1895).
 " " Saccardo, *Riv. Pat. Veg.*, iv, p. 49 (1895).
 " *hederæ* " " " " " p. 50 (1895).
 " *limonii* " " " " " p. 50 (1895).
 " *cycadicola* " " " " " p. 50 (1895).
 " *limonii* Berl., " " " " " p. 82 (1895).
 " *nerii* Lint., 11th Rep. *Ins. N. Y.*, p. 203 (1896).
 " " Lounsb., *Rep. Ent. Cape Good Hope*, p. 58 (1896).
 " *hederæ* Newst., *Ent. Mon. Mag.*, xxxii, p. 279 (1896).
 " *nerii* Davis, *Spec. Bull. 2, Mich. Exp. Sta.*, p. 34 (1896).
 " " Berl. e Leon., *Cherm. Ital., Fasc. ii, No. 26* (1897).
 " " Frog., *Rep. Dep. Ag. N. S. W.*, No. 175, p. 1 (1897).
 " " Newst., *Tr. Ent. Soc. Lond.*, p. 93 (1897).
 " *hederæ* Ckll., *Bull. 6, T. s., Dep. Ag.*, pp. 12, 18 (1897).
 " " Berl. e Leon., *Cherm. Ital., Fasc. ii, No. 40* (1897).
 " *ceratoniae* " " " " " " No. 41 (1897).
 " " Ckll., *Bull. 6, T. s., Dep. Ag.*, p. 18 (1897).
 " *affinis* " " " " " " p. 18 (1897).
 " *ericæ* " " " " " " p. 18 (1897).
 " *denticulatus* " " " " " " p. 18 (1897).
 " *genistæ* " " " " " " p. 18 (1897).
 " *gnidii* " " " " " " p. 18 (1897).
 " *lentisci* " " " " " " p. 18 (1897).
 " (*Diaspidiotus*) *ilicis* Ckll., *Bull. 6, T. s., Dep. Ag.*, p. 18 (1897).
 " " *villosus* " " " " " " p. 19 (1897).
 " *oleæ* " " " " " " p. 19 (1897).
 " *oleastri* " " " " " " p. 19 (1897).
 " *villosus* Berl. e Leon., *Cherm. Ital., Fasc. ii, No. 42* (1897).
 " *carpodeti* Ckll., *Bull. 6, T. s., Dep. Ag.*, p. 21 (1897).
 " *aloes* " " " " " " p. 29 (1897).
 " *buddleiæ* " " " " " " p. 29 (1897).
 " *cycadicola* " " " " " " p. 29 (1897).
 " *epidendri* " " " " " " p. 29 (1897).
 " *vriesciæ* " " " " " " p. 30 (1897).
 " *myrsinæ* " " " " " " p. 30 (1897).
 " *palmarum* " " " " " " p. 30 (1897).
 " *nerii* " " " " " " pp. 10, 30 (1897).
 " " *var. limonii* Ckll., *Bull. 6, T. s., Dep. Ag.*, p. 30 (1897).
 " *aloes* Green, *Ent. Mon. Mag.*, xxxiii, p. 69 (1897).
 " " Newst., " " " " " p. 77 (1897).
 " *hederæ* Targ., *Annali di Agr.*, p. 97 (1898).
 " *nerii* Osborn, *Contr. Ia. Ag. Coll.*, p. 7 (1898).
 " " Rolfs & Quaint., *Cocc. Amer.*, Dec. i-ii, No. 20 (1898).
 " " Newell, *Bull. 43, Ia. Exp. Sta.*, p. 168 (1899).

- Aspidiotus hederæ* var. *nerii* Hunter, Kan. Univ. Quar., viii, p. 11 (1899).
 “ “ King, Can. Ent., xxxi, p. 225 (1899).
 “ “ Leon., Lab. di Ent. Agr., Portici, p. 3 (1899).
 “ “ var. *carpodeti* Ckll. & Parr., The Industrialist, p. 276 (1899).
 “ “ Ckll., Check List, Suppl., p. 395 (1899).
 “ “ Berl. e Leon., Riv. Pat. Veg., vii, p. 71 (1899).
 “ (*Evaspidiotus*) *hederæ* Berl. e Leon., Riv. Pat. Veg., pp. 262, 268 (1899).
 “ “ “ Leon., Gen. e Spec. Diaspiti, Asp., p. 98 (1900).
 “ *hederæ* Newst., Journ. Roy. Hor. Soc., xxiii, p. 7 (1900).
 “ “ Marl., Yearbook U. S. Dep. Ag., p. 269 (1900).
 “ affinis “ Ent. News, xi, p. 426 (1900).
 “ *hederæ* Newst., Mon. Brit. Cocc., 1, p. 120 (1901).
 “ *nerii* Full., 1st Rep. Ent. Natal, p. 101 (1901).
 “ *hederæ* Lidg., Ent. News, xiii, p. 43 (1902).
 “ *carpodeti* “ “ “ “ “ p. 44 (1902).

Habitat.—Europe; S. Africa; New Zealand; Australia; Algeria; Madagascar; Hawaiian Islands; Bermuda; Chili; West Indies; Mexico; Georgia; Florida; California; Ohio; Canada.

On ivy; holly; box; orange; *Asparagus plumosus*; *Melia*; *Ruscus aculeatus*; *Ceratonia*; *Cerceris*; *Erica*; *Rubia peregrina*; *Genista*; *Daphne gnidium*; *Quercus ilex*; olive; *Aloe umbellata*; *Agave palmeri*; *Acacia*; *Cycas revoluta*; *Myrsine retusa*; *Vriescia splendens*; palms; orchids; *Carpodetus serratus*; *Vitex littoralis*; oleander; arbutus; *Magnolia*; cherry; plum; currant; lemon; *Camellia*; maple; *Yucca*; grass; clover, etc.—Tr. Ent. Soc. Lond., p. 93 (1897).

Aspidiotus hederæ simplex de Charm.

Aspidiotus aloes simplex de Charm., Pr. Soc. Amic. Scien., p. 20 (1899).

Habitat.—Mauritius.

1234. *Aspidiotus howardi* Ckll.

(*Howard's scale*.)

- Aspidiotus howardi* Ckll., Can. Ent., xxvii, p. 16 (1895).
 “ “ “ Bull. 19, N. Mex. Exp. Sta., p. 106 (1896).
 “ (*Diaspidiotus*) *howardi* Ckll., Bull. 6, T. s., Dep. Ag., p. 21 (1897).
 “ *howardi* Gillette, Bull. 38, Col. Exp. Sta., p. 37 (1897).
 “ (*Aspidiella*) *howardi* Leon., Riv. Pat. Veg., vi, p. 229 (1898).
 “ *howardi* Berl. e Leon., Annali di Agr., p. 107 (1898).
 “ “ Forbes, 20th Rep. Ins. Ill., p. 16 (1898).
 “ “ Newell, Contr. Ia. Ag. Coll., No. 3, p. 10 (1899).
 “ (*Aspidiella*) *howardi* Leon., Gen. e Spec. Diaspiti, Asp., p. 55 (1900).

Habitat.—Colorado; New Mexico.

On plum.

1235. *Aspidiotus hunteri* Newell.

- Aspidiotus hunteri* Newell, Contr. Ia. Ag. Coll., No. 3, pp. 2, 10, 31 (1899).
 " (*Diaspidiotus*) *hunteri* Leon., Gen. e Spec. Diaspiti, Asp., p. 223 (1900).
 Habitat.—Iowa; Texas.
 On currant.

1236. *Aspidiotus implicatus* Mask.

- Aspidiotus implicatus* Mask., Ent. Mon. Mag., xxxiii, p. 241 (1897) no desc.
 " " " N. Z. Trans., xxx, p. 226 (1898).
 " " Leon., Gen. e Spec. Diaspiti, Asp., p. 224 (1900).
 Habitat.—Formosa; China.
 On Campanula.

1237. *Aspidiotus jordani* Kuwana.

- Aspidiotus jordani* Kuw., Pr. Cal. Ac. Sci., (3), iii, p. 69 (1902).
 Habitat.—Japan.
 On oak.

1238. *Aspidiotus juglandis* Colvée.

- Aspidiotus juglandis* Colvée, Bull. Soc. Ent. Fr., (6), i, p. clxv (1881).
 Habitat.—Spain.
 On walnut.

1239. *Aspidiotus juglans-regiæ* Comst.

(*English walnut scale*.)

- Aspidiotus juglans-regiæ* Comst., Rep. U. S. Dep. Ag., 1880, p. 300 (1881).
 " " Pack., 5th Rep. U. S. Ent. Com., p. 335 (1890).
 " " Morg., Bull. 28, La. Exp. Sta., p. 993 (1893).
 " " Howard, Yearbook U. S. Dep. Ag., p. 264 (1894).
 " " Ckll., The Entom., xxvii, p. 334 (1894).
 " " " Can. Ent., xxvi, pp. 131, 354 (1894).
 " " Hillman, Bull. 36, Nev. Exp. Sta., p. 33 (1897).
 " " Starnes, Bull. 36, Ga. Exp. Sta., p. 23 (1897).
 A. (*Diaspidiotus*) " Ckll., Bull. 6, T. s., Dep. Ag., pp. 8, 16, 17, 21 (1897).
Aspidiotus " Osborn, Contr. Ia. Ag. Coll., p. 7 (1898).
 " " Leon., Riv. Pat. Veg., vii, p. 40 (1898).
 " " Rolfs & Quaint., Cocc. Amer., Dec. i-ii, No. 19 (1898).
 " " Hunter, Kan. Univ. Quar., viii, p. 8 (1899).
 " " Newell, Contr. Ia. Ag. Coll., No. 3, p. 19 (1899).
 " " Fletcher, Rep. Ont. Dep. Ag., p. 38 (1900).
 " (*Evaspidiotus*) *juglans-regiæ* Leon., Gen. e Spec. Diaspiti, Asp., p. 67 (1900).
 " *juglans-regiæ* Banks, Bull. 34, n. s., Dep. Ag., p. 19 (1902).
 " " Pettit, Bull. 200, Mich. Exp. Sta., p. 191 (1902).

Habitat.—Can.; Mass.; N. Y.; D. C.; Miss.; La.; Tex.; N. Mex.; Cal.; Ohio; Switzerland.

On walnut; apricot; apple; pear; peach; cherry; Japan plum; locust; maple, etc.

Aspidiotus juglans-regiæ pruni Ckll.

- Aspidiotus juglans-regiæ var. pruni Ckll., Can. Ent., xxvi, p. 132 (1894).
 " " " " " Bull. 6, T. s., Dep. Ag., p. 21 (1897).
 " " " " Leon., Riv. Pat. Veg., vii, p. 42 (1898).
 " " " " Newell, Contr. Ia. Ag. Coll., No. 3, p. 21 (1899).
 " " " " Leon., Gen. e Spec. Diaspiti, Asp., p. 69 (1900).

Habitat.—New Mexico.

On plum; bark of Liquidambar.

Aspidiotus juglans-regiæ albus Ckll.

- Aspidiotus juglans-regiæ var. albus Ckll., Can. Ent., xxvi, p. 132 (1894).
 " " " " Howard, Ins. Life, vii, p. 211 (1894).
 " " " " Ckll., Bull. 6, T. s., Dep. Ag., p. 21 (1897).
 " " " " Leon., Riv. Pat. Veg., vii, p. 43 (1898).
 " " " " Gen. e Spec. Diaspiti, Asp., p. 70 (1900).

Habitat.—New Mexico.

On pear; plum; apple; apricot; ash.

Aspidiotus juglans-regiæ kafkæ Ckll.

- Aspidiotus juglans-regiæ var. kafkæ Ckll., The Entom., xxxi, p. 65 (1898).
 " " " " Leon., Gen. e Spec. Diaspiti, Asp., p. 224 (1900).

Habitat.—Austria.

On bark of Fraxinus excelsior.

1240. Aspidiotus kennedyæ (Bdv.).

- Chermes kennedyæ Bdv., Ent. Hort., p. 326 (1867).
 Aspidiotus " Sign., Ann. Soc. Ent. Fr., (4), ix, p. 124 (1869).
 " " Comst., 2nd Rep. Dep. Ent. Corn. Univ., p. 78 (1883).
 " " Ckll., Bull. 6, T. s., Dep. Ag., p. 29 (1897).

Habitat.—Australia.

On Kennedyia.

1241. Aspidiotus lataniæ Sign.

- Aspidiotus lataniæ Sign., Ann. Soc. Ent. Fr., (4), ix, p. 124 (1869).
 " " Comst., 2nd Rep. Dep. Ent. Corn. Univ., p. 78 (1883).
 " " Ckll., Bull. 6, T. s., Dep. Ag., p. 29 (1897).
 " " Green, Ent. Mon. Mag., xxxv, p. 181 (1899).
 " " Newell, Contr. Ia. Ag. Coll., No. 3, p. 31 (1899).
 " " de Charm., Pr. Soc. Amic. Scien., p. 25 (1899).
 " " Ckll., Psyche, ix, p. 72 (1900).
 " (Hemiberlesia) lataniæ Hemp., Rev. Mus. Paul., iv, p. 502 (1900).
 " (Evaspidiotus) " Leon., Gen. e Spec. Diaspiti, Asp., p. 96 (1900).
 " (Hemiberlesia) " Kuw., Jn. N. Y. Ent. Soc., x, p. 31 (1902).

Habitat.—Europe (in hot houses); Mauritius; Galapagos Islands; Brazil.
On *Latania*; *Areca lutescens*; cocoanut-palm; *Scalesia*.

The synonymy of *lataniae*, *cydoniae*, *greenii* and *punicæ* is uncertain and it is very doubtful whether that given in this work is correct.

1242. *Aspidiotus latastei* Ckll.

Aspidiotus latastei Ckll., Actes Soc. Sci. Chili, p. 35 (1894).

“ “ “ Bull. 6, T. s., Dep. Ag., pp. 15, 24 (1897).

“ “ Leon., Riv. Pat. Veg., vii, p. 55 (1898).

“ (*Evaspidiotus*) *latastei* Leon., Gen. e Spec. Diaspiti, Asp., p. 82 (1900).

Habitat.—Chili.

1243. *Aspidiotus lucumæ* Ckll.

Aspidiotus lucumæ Ckll., Biol. Centr. Amer., ii, pt. 2, p. 22 (1899).

“ “ Marlatt, Can. Ent., xxxi, p. 211 (1899).

Habitat.—Mexico.

On bark of “*Mammea sapota*.”

1244. *Aspidiotus maculatus* Newst.

Aspidiotus maculatus Newst., Ent. Mon. Mag., xxxii, p. 133 (1896).

“ “ Ckll., Bull. 6, T. s., Dep. Ag., p. 28 (1897).

Hemiberlesia maculata Leon., Riv. Pat. Veg., vi, p. 123 (1897).

“ “ “ Gen. e Spec. Diaspiti, Asp., p. 22 (1900).

Habitat.—Africa.

1245. *Aspidiotus minimus* (Leon.).

|| *Aspidites minimus* Leon., Riv. Pat. Veg., iv, p. 350 (1896).

“ “ Berl. e Leon., Cherm. Ital., Fasc. ii, No. 45 (1897).

Aspidiotus “ Ckll., Bull. 6, T. s., Dep. Ag., pp. 12, 18 (1897).

Hemiberlesia minima Leon., Riv. Pat. Veg., vi, p. 126 (1898).

“ “ “ Gen. e Spec. Diaspiti, Asp., p. 25 (1900).

Habitat.—Italy.

On *Quercus ilex*.

1246. *Aspidiotus myoporii* Lidg.

Aspidiotus myoporii Lidg., The Wombat, iv, p. 14 (1898).

Chrysomphalus Yoporii [typ. err.] Leon., Gen. e Spec. Diaspiti, Asp., p. 226 (1900).

Habitat.—Australia.

On *Myoporum deserti*.

1247. *Aspidiotus nigropunctatus* Ckll.

Aspidiotus nigropunctatus Ckll., Psyche, vii, Suppl., i, p. 20 (1896).

“ “ “ Bull. 4, T. s., Dep. Ag., p. 31 (1896).

A. (*Melanaspis*) “ “ “ 6, “ “ “ pp. 13, 24 (1897).

Chrysomphalus “ Leon., Riv. Pat. Veg., vii, p. 207 (1899).

“ “ “ Gen. e Spec. Diaspiti, Asp., p. 162 (1900).

Habitat.—Mexico.

On “*Trueno*.”

1248. *Aspidiotus niveus* Full.

Aspidiotus niveus Full., Notes on Cocc. W. Austr., p. 11 (1897).

" " " Tr. Ent. Soc. Lond., p. 465 (1899).

Habitat.—W. Australia.

On *Acacia pulchella*.

1249. *Aspidiotus orientalis* Newst.

Aspidiotus orientalis Newst., Ind. Mus. Notes, iii, No. 5, p. 26 (1894).

" *osbeckiæ* Green, " " " iv, p. 4 (1896).

" " " Cocc. Ceylon, pt. i, p. 47 (1896).

" *orientalis* Ckll., Bull. 6, T. s., Dep. Ag., p. 28 (1897).

A. (*Diaspidiotus*) *osbeckiæ* Ckll., Bull. 6, T. s., Dep. Ag., p. 28 (1897).

Aspidiotus (*Evaspidiotus*) *osbeckiæ* Leon., Riv. Pat. Veg., vii, p. 77 (1898).

" " *orientalis* " " " " p. 79 (1898).

" " " " Gen. e Spec. Diaspiti, Asp., p. 106 (1900).

" " *osbeckiæ* Leon., Gen. e Spec. Diaspiti, Asp., p. 104 (1900).

Habitat.—India; Ceylon.

On *Osbeckia*.

1250. *Aspidiotus osborni* Newell & Ckll.

Aspidiotus osborni Newell & Ckll., Rep. Ia. Ac. Sci., v, p. 229 (1898).

" " Osborn, Contr. Ia. Ag. Coll., p. 6 (1898).

" " Newell, " " " " No. 3, pp. 2, 5 (1899).

" " Hunter, Kan. Univ. Quar., viii, p. 5 (1899).

" " Newell, Bull. 43, Ia. Exp. Sta., p. 165 (1899).

A. (*Diaspidiotus*) *osborni* Leon., Gen. e Spec. Diaspiti, Asp., p. 223 (1900).

Habitat.—Kansas; Iowa; Georgia.

On *Quercus alba*; *Ostrya virginica*.

1251. *Aspidiotus osmanthi* Vall.

Chermes osmanthi Vall., Mem. Acad. Dijon, p. 32 (1829).

Aspidiotus " Sign., Ann. Soc. Ent. Fr., (5), vi, p. 621 (1876).

" " Ckll., Bull. 6, T. s., Dep. Ag., p. 30 (1897).

Habitat.—France.

On *Olea fragrans*.

1252. *Aspidiotus ostreæformis* Curt.

(*Pear-tree oyster scale*.)

Aspidiotus ostreæformis Curt. (*Ruricola*), Gard. Chron., iii, p. 805 (1843).

" *betulæ* Baer., D'Alton, Zeit. für Zool., p. 165 (1849).

" *tillæ* Bouché, Stett. Ent. Zeit., xii, p. 111 (1851).

" *betulæ* Targ., Catalogue, p. 43 (1869).

" " Sign., Ann. Soc. Ent. Fr., (4), ix, p. 115 (1869).

- Aspidiotus hippocastani Sign., Ann. Soc. Ent. Fr., (4), ix, p. 136 (1869).
- ? " oxyacanthæ " " " " " " " p. 137 (1869).
- " tiliaë " " " " " " " p. 137 (1869).
- " spurcatus " " " " " " " p. 138 (1869).
- " betulaë Comst., 2nd Rep. Dep. Ent. Corn. Univ., p. 73 (1883).
- " hippocastani " " " " " " " p. 77 (1883).
- " oxyacanthæ " " " " " " " p. 80 (1883).
- " spurcatus " " " " " " " p. 82 (1883).
- " tiliaë " " " " " " " p. 83 (1883).
- " spurcatus Witlaczil, Zur Morph. Anat. Cocc., p. 158 (1885).
- " ostreæformis Dougl., Ent. Mon. Mag., xxiii, p. 239 (1887).
- " " Morg., " " " " xxv, pp. 45, 350 (1888).
- " (Diaspidiotus) spurcatus Berl. e Leon., Cherm. Ital., Fasc. i, No. 3 (1895).
- " " ostreæformis Ckll., Bull. 6, T. s., Dep. Ag., pp. 5, 8, 15, 19 (1897).
- " " betulaë " " " " " " pp. 15, 18 (1897).
- " " hippocastani " " " " " " p. 18 (1897).
- " " oxyacanthæ " " " " " " p. 19 (1897).
- " " spurcatus " " " " " " p. 19 (1897).
- " " tiliaë " " " " " " p. 19 (1897).
- " ostreæformis Goethe, Ber. Kgl. Lehr. Obst.—Wien. & Gartenbau, p. 23 (1898).
- " " " Zeitschr., Pflanzenkrankh., viii, p. 80 (1898).
- " " Laem., Die Obstbaumschadlinge, Dresden, p. 36 (1898).
- " " Berl. e Leon., Annali di Agr., p. 96 (1898).
- " " Marlatt, Science, n. s., x, p. 18 (1899).
- " " Newell, Contr. Ia. Ag. Coll., No. 3, pp. 17, 31 (1899).
- " " Lockhead, Rep. Ent. Soc. Ont., p. 67 (1899).
- " " Fletcher, " " " " " p. 109 (1899).
- " (Evaspidiotus) betulaë Leon., Riv. Pat. Veg., vii, p. 38 (1899).
- " betulaë Leon., Gen. e Spec. Diaspiti, Asp., p. 65 (1900).
- " oxyacanthæ " " " " " " p. 65 (1900).
- " spurcatus " " " " " " p. 65 (1900).
- " ostreæformis, Marlatt, Ent. News, xi, p. 590 (1900).
- " " Pettit, Bull. 180, Mich. Exp. Sta., p. 120 (1900).
- " " Newst., Jn. Roy. Hor. Soc., xxiii, p. 5 (1900).
- " " Frank & Kruger, Schildlausbuch, pp. 41, 51 (1900).
- " " Pettit, 37th Rep. Mich. Bd. Ag., p. 248 (1900).
- " " Reh, Zool. Anzeiger, xxiii, p. 497 (1900).
- " " Felt, Bull. 46, N. Y. St. Mus., pp. 323, 352 (1901).
- " " Newst., Mon. Brit. Cocc., i, p. 99 (1901).
- " " Quaint. & Scott, Cocc. Amer., Dec. iii-iv, No. 13 (1901).
- " " Banks, Bull. 34, n. s., Dep. Ag., p. 18 (1902).

Habitat.—Europe; Br. Col.; Prince Edward's Island; Ontario; New York; New Jersey; Mich.; Ohio; Iowa; Idaho; California.

On apple; pear; plum; peach; cherry; birch; poplar; horse-chestnut; linden; alder; *Cratægus*; maple; aspen; oak; date-palm; *Calluna vulgaris*.

***Aspidiotus ostreæformis oblongus* Goethe.**

Aspidiotus ostreæformis var. *oblongus* Goethe, Ber. Kgl. Lehr. Obst.—Wien. & Gartenbau, p. 16 (1899).

Habitat.—Germany.

On apple; pear.

***Aspidiotus ostreæformis magnus* Goethe.**

Aspidiotus ostreæformis var. *magnus* Goethe, Ber. Kgl. Lehr. Obst.—Wien. & Gartenbau, p. 16 (1899).

Habitat.—Germany.

On plum.

1253. *Aspidiotus palmæ* Morg. & Ckll.

Aspidiotus palmæ Ckll., Ent. Mon. Mag., xxix, pp. 39, 40 (1893) no desc.

“ “ Morg., “ “ “ “ p. 40 (1893).

“ “ Ckll., Ins. Life, v, p. 245 (1893).

“ (*Hemiberlesia*) *palmæ* Ckll., Bull. 6, T. s., Dep. Ag., p. 24 (1897).

“ *palmæ* Ckll., Bull. Bot. Dep. Jam., p. 151 (1897).

“ (*Evaspidiotus*) *palmæ* Leon., Riv. Pat. Veg., vii, p. 51 (1898).

“ *palmæ* Newell, Contr. Ia. Ag. Coll., No. 3, p. 28 (1899).

“ (*Evaspidiotus*) *palmæ* Leon., Gen. e Spec. Diaspiti, Asp., p. 78 (1900).

Habitat.—West Indies.

On banana; cocoanut-palm.

1254. *Aspidiotus pandani* (Bdv.).

Coccus pandani Bdv., Insectologie Agricole, ii, p. 301 (1868).

Aspidiotus “ Sign., Ann. Soc. Ent. Fr., (4), ix, p. 131 (1869).

“ “ Comst., 2nd Rep. Dep. Ent. Corn. Univ., p. 80 (1883).

“ “ Ckll., Bull. 6, T. s., Dep. Ag., p. 30 (1897).

Habitat.—India.

On *Pandanus utilis*.

1255. *Aspidiotus patavinus* Berl.

Aspidiotus (*Diaspidiotus*) *patavinus* Berl., Riv. Pat. Veg., iv, p. 350 (1896).

“ “ “ “ Ckll., Bull. 6, T. s., Dep. Ag., p. 19 (1897).

“ (*Evaspidiotus*) “ “ Leon., Riv. Pat. Veg., vii, p. 48 (1898).

“ “ “ “ Gen. e Spec. Diaspiti, Asp., p. 75 (1900).

Habitat.—Italy.

On cherry.

1256. *Aspidiotus perniciosus* Comst.*(San Jose scale.)*

- Aspidiotus perniciosus* Comst., Rep. U. S. Dep. Ag., 1880, p. 304 (1881).
- " " Cooke, Treatise on Ins., p. 33 (1881).
- " " Osborn, Tr. Ia. Hor. Soc., p. 519 (1883).
- " " Comst., 2nd Rep. Dep. Ent. Corn. Univ., p. 65 (1883).
- " " Chapin, Rep. Cal. Bd. Hort., p. 91 (1883).
- " " Klee, " " " " 1885-6, p. 373 (1887).
- " " " " " " p. 245 (1888).
- " " " " " " Treatise on Ins. Cal., p. 10 (1888).
- " " Lelong, Rep. Cal. Bd. Hort., p. 170 (1889).
- " " " " " " Bull. 53, Cal. Bd. Hort., p. 3 (1889).
- " " Riley & How., Ins. Life, iii, p. 68 (1890).
- " " Lelong, Rep. Cal. Bd. Hort., pp. 196, 198 (1891).
- " " Coq., Bull. 26, Div. Ent. Dep. Ag., p. 21 (1892).
- " " Towns., Bull. 7, N. Mex. Exp. Sta., pp. 6, 7 (1892).
- " " Olliff, Ag. Gaz. N. S. W., iii, pt. 9, pp. 698, 699 (1892).
- " " Riley & How., Ins. Life, v, p. 53 (1892).
- " " Ckll., Bull. 10, N. Mex. Exp. Sta., pp. 14, 16 (1893).
- " " Koebele, Spec. Bull. U. S. Dep. Ag., p. 39 (1893).
- " " Howard, Circ. No. 3, Ser. 2, Div. Ent. Dep. Ag. (1894).
- " " " " " " Pr. Ent. Soc. Wash., iii, p. 220 (1894).
- " " Schwarz, Ins. Life, vi, p. 247 (1894).
- " " Coq., " " " " pp. 253, 324 (1894).
- " " Rolfs, Pr. Fla. St. Hor. Soc., pp. 94, 99 (1894).
- " " Riley, Rep. Va. St. Bd. Agr., p. 172 (1894).
- " " Smith, Ent. News, v, pp. 182, 312 (1894).
- " " " " " " Garden & Forest, vii, p. 344 (1894).
- " " Riley & How., Ins. Life, vi, p. 360 (1894).
- " " " " " " Proc. Am. Assoc. Adv. Sci., xliii, p. 229 (1894).
- " " Howard, Yearbook U. S. Dep. Ag., p. 267 (1894).
- " " " " " " Ins. Life, vii, p. 153 (1894).
- " " Smith, " " " " " " p. 163 (1894).
- " " Serrine, Garden & Forest, vii, p. 449 (1894).
- " " Weed C. M., Bull. 23, N. H. Exp. Sta., p. 14 (1894).
- " " Smith, Bull. 106, N. J. Exp. Sta., p. 24 (1894).
- " " Howard, Can. Ent., xxvi, p. 353 (1894).
- " " Lint., Rural New Yorker, liii, p. 791 (1894).
- " " Webster, Bull. 56, Ohio Exp. Sta. (1895).
- " " Fletcher, Evidence Com. Agr. Ont., p. 312 (1894).
- " " " " " " Rep. Ent. Can. Exp. Farms, p. 206 (1894).
- " " " " " " 25th Rep. Ent. Soc. Ont., p. 73 (1894).
- " " Webster, Pr. Columbus Hor. Soc., p. 168 (1894).
- ?*Aonidia fusca* Mask., N. Z. Trans., xxvii, p. 43 (1894).
- Aspidiotus perniciosus* Smith, Rep. N. J. Exp. Sta., 1894, pp. 478, 494 (1895).
- " " Slingerland, Rural New Yorker, liv, pp. 5, 167 (1895).

- Aspidotus perniciosus* Fox, Circ. Penn. St. Bd. Agr., Jan. 23 (1895).
- “ “ Howard, Ins. Life, vii, p. 283 (1895).
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- “ “ Riley, Bull. 32, Md. Exp. Sta., April (1895).
- “ “ Taft & Davis, Bull. 121, Mich. Exp. Sta., p. 36 (1895).
- “ “ Lint., Bull. 13, N. Y. St. Mus., p. 275 (1895).
- “ “ Smith, Ent. News, vi, p. 153 (1895).
- “ “ Beckwith, Bull. 25, Del. Exp. Sta. (1895).
- “ “ Toumey, Bull. 14, Ariz. Exp. Sta., p. 32 (1895).
- “ “ Marlatt, Ins. Life, vii, pp. 365, 374 (1895).
- “ “ Sturgis & Britton, Bull. 121, Conn. Exp. Sta., p. 6 (1895).
- “ “ Fern. C. H., Mass. Crop. Rep., Aug., p. 23 (1895).
- “ “ Rolfs, Bull. 29, Fla. Exp. Sta. (1895).
- “ “ Washb., “ 38, Ore. “ “ p. 7 (1895).
- “ “ Piper, “ 17, Wash. “ “ (1895).
- “ “ Hillman, “ 29, Nev. “ “ (1895).
- “ “ Schiedt, Rep. Penn. St. Bd. Agr., 1895, p. 579 (1896).
- “ “ Mask., N. Z. Trans., xxviii, p. 386 (1896).
- “ “ “ Can. Ent., xxviii, p. 14 (1896).
- “ “ Green, Ent. Mon. Mag., xxxii, p. 84 (1896).
- “ “ Lowe & Sirrine, Rep. N. Y. Exp. Sta., 1895, p. 605 (1896).
- “ “ Beckwith, Bull. 30, Del. Exp. Sta., p. 16 (1896).
- “ “ Cooley, “ 36, Mass. “ “ p. 13 (1896).
- “ “ Alwood, “ 62, Va. “ “ p. 31 (1896).
- “ “ Kinney, “ 37, R. I. “ “ p. 43 (1896).
- “ “ Webster, “ 72, Ohio “ “ p. 211 (1896).
- “ “ Ckll., “ 19, N. Mex. “ “ p. 108 (1896).
- “ “ Smith, “ 116, N. J. “ “ p. 75 (1896).
- “ “ Alwood, “ 66, Va. “ “ p. 77 (1896).
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- “ “ Stedman, Circ. 3, Mo. Exp. Sta. (1896).
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- “ “ Fletcher, “ Ent. Can. Exp. Farms, p. 253 (1896).
- “ “ Howard & Marlatt, Bull. 3, n. s., Dep. Ag. (1896).
- “ “ Alwood, Circ. 3, Va. Dep. Hort. (1896).
- “ “ Johnson, Bull. 42, Md. Exp. Sta., p. 154 (1896).
- “ “ Powell, “ 33, Del. “ “ p. 3 (1896).
- “ “ Webster, Ann. Rep. Ohio St. Hor. Soc., p. 85 (1896).
- “ “ Lintner, 11th “ Ins. N. Y., 1895, p. 200 (1896).
- “ “ Slingerland, Pr. West. N. Y. Hor. Soc., p. 18 (1896).
- “ “ Sturgis & Britton, 19th Rep. Conn. Exp. Sta., p. 194 (1896).
- ?*Aonidia fusca* Mask., Can. Ent., xxviii, p. 14 (1896).
- “ “ Green, Ent. Mon. Mag., xxxii, p. 84 (1896).
- Aspidiotus perniciosus* Forbes, Bull. 48, Ill. Exp. Sta., p. 413 (1897).
- “ “ Gillette, “ 38, Col. “ “ p. 33 (1897).
- A. (*Diaspidiotus*) “ Ckll., Bull. 6, T. s., Dep. Ag., p. 30 (1897).

- Aspidiotus perniciosus* Fletcher, Rep. Ent. Soc. Ont., p. 78 (1897).
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 " " Baker, Bull. 77, Ala. Exp. Sta., p. 27 (1897).
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 " " Barrows, " 9, n. s., Dep. Ag., p. 27 (1897).
 " " Johnson, " " " " " p. 82 (1897).
 " " Beckwith, 9th Rep. Del. Exp. Sta., p. 199 (1897).
 " " Frog., Agr. Gaz. N. S. W., p. 874 (1897).
 " " Smith, Ent. News, viii, p. 221 (1897).
 " " Kruger, "Die Natur," xlv, p. 584 (1897).
 " " Hillman, Bull. 36, Nev. Exp. Sta., p. 29 (1897).
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 " " Smith, Rep. N. J. Exp. Sta., 1897, p. 436 (1898).
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 ? " *fusca* " " Annali di Agr., p. 118 (1898).
Aspidiotus perniciosus Forbes, 20th Rep. Ins. Ill., p. 1 (1898).
 " " Felt, 14th " " N. Y., p. 240 (1898).
 " " Smith E., New York Horticulturist, Jan. (1898).
 " " French C., Dep. Agr., Victoria, No. 35 (1898).
 " " Stedman, Rep. Mo. Exp. Sta., p. 17 (1898).
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 " " Hedrick, " 55, Utah " " p. 161 (1898).
 " " Chambliss, " 4, Tenn. " " p. 141 (1898).

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 " " Hunter, Bull. Dep. Ent. Kan. Univ., p. 7 (1898).
 " " Ckll., Ent. News, ix, p. 95 (1898).
 " " Rolfs & Quaint., Cocc. Amer., Dec. i-ii, No. 15 (1898).
 " " Piper & Doane, Bull. 35, Wash. Exp. Sta., p. 3 (1898).
 " " Brick, Jahrb. Hamb. Wiss. Anst., xvi, p. 12 (1898).
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 " " Alwood, 2nd Rep. Inspector San Jose Scale, Va. (1899).
 ?*Aonidiella fusca* Leon., Riv. Pat. Veg., vii, p. 187 (1899).
 " *perniciosa* " " " " " p. 189 (1899).
 " " " Gen. e Spec. Diaspiti, Asp., p. 129 (1900).
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| " | " " Stewart, Bull. 78, W. Va. Exp. Sta. (1902). |
| " | " " Kuw., Pr. Cal. Ac. Sci., (3), iii, p. 67 (1902). |
| " | " " Lowe & Parr., Bull. 228, N. Y. Exp. Sta. (1902). |
| " | " " Smith, Bull. 162, N. J. Exp. Sta. (1902). |
| " | " " Banks, Bull. 34, n. s., Dep. Ag., p. 15 (1902). |
| " | " " Smith J. B., Bull. 90, Pa. Dep. Ag. (1902). |
| " | " " Fisher, Rep. Ent. Soc. Ont., p. 3 (1902). |
| " | " " Fernald H. T., Bull. 86, Mass. Exp. Sta. (1903). |
| " | " " Sanders., Bull. 58, Del. Exp. Sta. (1903). |

Habitat.—Canada; United States; Chili; Germany; Australia; Japan; China; Hawaiian Islands.

On apple; crab-apple; pear; peach; quince; Japanese quince; apricot; plum; Japan plum; Satsuma plum; *Prunus maritima*; *P. pissardi*; *P. domestica*; *P. avium*; almond; *Crataegus*; persimmon; English walnut; black walnut; Japan walnut; Lombardy poplar; Carolina poplar; golden-leaved poplar; chestnut; sumac; *Catalpa speciosa*; English willow; golden willow; weeping willow; laurel-leaved willow; osage-orange; American linden; European linden; ash; dogwood; elm; orange; lemon; lime; Juneberry; Acacia; *Euonymus*; alder; *Eucalyptus corynocalyx*; laurel; hawthorn; snow-ball; *Ptelea trifoliata*; silver-maple; *Spiraea*; rose; strawberry; raspberry; gooseberry; currant; huckleberry; cotoneaster; pecan; *Actinidia*; *Lonicera xylosteum*; *Symphoricarpos racemosus*; cut-leaved-birch; milkweed; spruce; cedar, etc. For a late list see Rep. Conn. Exp. Sta., 1902, p. 132 (1903).

Aspidiotus perniciosus albopunctatus Ckll.

- Aspidiotus albopunctatus* Kkll., Psyche, vii, Suppl., 1, p. 20 (1896).
 " " Craw, 5th Bien. Rep. Cal. Bd. Hort., p. 33 (1896).
 " " Kkll., Bull. 4, T. s., Dep. Ag., p. 43 (1896).

- A. (*Diaspidiotus*) *perniciosus* var. *albopunctatus* Ckll., Bull. 6, T. s., Dep. Ag., p. 20 (1897).
Habitat.—Japan; California.
On orange and plum from Japan.

***Aspidiotus perniciosus andromelas* Ckll.**

- A. (*Diaspidiotus*) *andromelas* Ckll., Bull. 6, T. s., Dep. Ag., pp. 14, 20 (1897).
Aonidiella " Leon., Gen. e Spec. Diaspiti, Asp., p. 224 (1900).
Habitat.—Japan.
On "*Phœtenia glauca*."

1257. *Aspidiotus persearum* Ckll.

- Aspidistus* [typ. err.] *persearum* Ckll., The Entom., xxxi, p. 240 (1898).
Aspidiotus " Craw, Rep. Cal. Bd. Hort., 1897-98, p. 108 (1898).
" (*Evaspidiotus*) " Leon., Gen. e Spec. Diaspiti, Asp., p. 224 (1900).
" " Kuw., Pr. Cal. Ac. Sci., (3), iii, p. 65 (1902).
Habitat.—Hawaiian Islands; Japan.
On *Persea gratissima*; *Trachycarpus excelsus*; *Magnolia*.

1258. *Aspidiotus phormii* "Brême," Sign.

- Aspidiotus phormii* "Brême," Sign., Ann. Soc. Ent. Fr., (4), ix, p. 130 (1869).
" " Comst., 2nd Rep. Dep. Ent. Corn. Univ., p. 80 (1883).
" " Ckll., Psyche, vii, Suppl., i, p. 8 (1895).
" " " Bull. 6, T. s., Dep. Ag., p. 30 (1897).
Habitat.—France; Switzerland.
On *Phormium tenax*.

1259. *Aspidiotus putearius* Green.

- Aspidiotus putearius* Green, Cocc. Ceylon, pt. i, p. 54 (1896).
" " Ckll., Bull. 6, T. s., Dep. Ag., pp. 10, 28 (1897).
Hemiberlesia " Leon., Riv. Pat. Veg., vi, p. 131 (1897).
" " " Gen. e Spec. Diaspiti, Asp., p. 30 (1900).
Habitat.—Ceylon.
On *Strobilanthes viscosus*.

1260. *Aspidiotus pyri* Licht.

- Aspidiotus pyri* Licht., Bull. Soc. Ent. Fr., (9), i, p. lii (1881).
" " Reh, Zool. Anzeiger, xxiii, p. 497 (1900).
Habitat.—France; Switzerland.
On pear; apple.

1261. *Aspidiotus rapax* Comst.

(*The Greedy scale*.)

- || *Aspidiotus camelliae* Sign. (non Bdv.), Ann. Soc. Ent. Fr., (4), ix, p. 117 (1869).
? " *acuminatus* Targ., Relaz. del. Staz. Ent. Agrar., Firenze, pp. 78, 153 (1877-78).
" *camelliae* Mask., N. Z. Trans., xi, p. 200 (1878).

- Aspidiotus convexus* Comst., Rep. U. S. Dep. Ag., 1880, p. 285 (1881) in part.
 " rapax " " " " " " p. 307 (1881).
 " " Saund., Ins. Inj. to Fruits, p. 423 (1883).
 " camelliæ Mask., N. Z. Trans., xvii, p. 21 (1884).
 ? " acuminatus Targ., Annali di Agr., pp. 38, 41 (1884).
 " camelliæ Morg., Ent. Mon. Mag., xxiv, pp. 68, 79 (1887).
 " rapax " " " " " pp. 68, 79 (1887).
 " camelliæ Mask., Ins. Nox. Agr. N. Z., p. 41 (1887).
 " rapax Morg., Ent. Mon. Mag., xxv, p. 119 (1888).
 " camelliæ " " " " " p. 351 (1888).
 " flavescens Green, Ceylon Independent (1889).
 " " Riley & How., Ins. Life, ii, p. 193 (1889).
 " rapax Pack., 5th Rep. U. S. Ent. Com., p. 371 (1890).
 " convexus " " " " " " p. 595 (1890).
 " camelliæ Mask., N. Z. Trans., xxiii, p. 3 (1890).
 " " " Ent. Mon. Mag., xxviii, p. 70 (1892).
 " rapax Towns., Bull. 7, N. Mex. Exp. Sta., p. 9 (1892).
 " convexus " " " " " " p. 10 (1892).
 " " Coq., Bull. 26, Div. Ent. Dep. Ag., p. 20 (1892).
 " rapax " " " " " " " p. 25 (1892).
 " flavescens Green, Ind. Mus. Notes, ii, No. 6, p. 168 (1893).
 " " " " " " " iii, No. 4, p. 41 (1894).
 " rapax Morg., Bull. 28, La. Exp. Sta., p. 996 (1894).
 " convexus Ckll., Can. Ent., xxvi, p. 287 (1894) in part.
 " camelliæ " " " " " p. 354 (1894).
 " " Mask., N. Z. Trans., xxvii, p. 39 (1894).
 " " Howard, Yearbook U. S. Dep. Ag., p. 261 (1894).
 " " Berl. e Leon., Cherm. Ital., Fasc. i, No. 6 (1895).
Hemiberlesia " Saccardo, Riv. Pat. Veg., iv, p. 50 (1895).
Aspidiotus " Lounsb., Rep. Ent. Cape Good Hope, p. 63 (1896).
 " " Green, Cocc. Ceylon, pt. i, p. 60 (1896).
Diaspis circulata " Ind. Mus. Notes, iv, p. 4 (1896).
 " " Ckll., Check List, p. 339 (1896).
Aspidiotus camelliæ Berl. e Leon., Cherm. Ital., Fasc. ii, No. 44 (1897).
 " " Starnes, Bull. 36, Ga. Exp. Sta., p. 24 (1897).
Hemiberlesia " Leon., Riv. Pat. Veg., vi, p. 124 (1897).
Aspidiotus rapax Full., Notes on Cocc. W. Austr., p. 4 (1897).
A. (Hemiberlesia) rapax Ckll., Bull. 6, T. s., Dep. Ag., p. 30 (1897).
 " " convexus " " " " " " p. 20 (1897).
Hemiberlesia camelliæ Berl. e Leon., Cherm. Ital., Fasc. iii, No. 61 (1897).
Aspidiotus rapax Osborn, Contr. Ia. Ag. Coll., p. 7 (1898).
 " convexus Newell, " " " " " " No. 3, p. 25 (1899).
 " rapax " " " " " " " p. 29 (1899).
 " " " Bull. 43, Ia. Exp. Sta., p. 169 (1899).
 " " Marlatt, Can. Ent., xxxi, pp. 209, 211 (1899).
 " camelliæ " " " " " " pp. 209, 211 (1899).
 " convexus " " " " " " pp. 208, 211 (1899).

Aspidiotus (Evaspidiotus) convexus Leon., Riv. Pat. Veg., vii, p. 50 (1899) in part.

“ *acuminatus* Ckll., Pr. Ac. N. Sci. Ph., p. 274 (1899).

“ *rapax* Frank & Kruger, Schildlausbuch, p. 75 (1900).

“ (*Hemiberlesia*) *camelliæ* Hemp., Rev. Mus. Paul., iv, p. 501 (1900).

Hemiberlesia camelliæ Leon., Gen. e Spec. Diaspiti, Asp., p. 23 (1900).

Aspidiotus “ Newst., Journ. Roy. Hor. Soc., xxiii, p. 4 (1900).

“ “ “ Mon. Brit. Cocc., i, p. 91 (1901).

“ “ Full., 1st Rep. Ent. Natal, p. 101 (1901).

“ “ Frog., Ag. Gaz. N. S. W., p. 18 (1902).

“ *rapax* Banks, Bull. 34, n. s., Dep. Ag., p. 20 (1902).

Habitat.—United States (in greenhouses in the north); Mexico?; West Indies; Brazil; Europe; Hawaiian Islands; New Zealand; Australia; Natal; S. Africa.

On *Camellia*; cottonwood; walnut; willow; maple; birch; holly; laurel; *Acacia*; olive; fig; almond; orange; lemon; apple; pear; quince; silver-tree; tea; *Fuchsia*; *Eucalyptus*; *Myoporum*; *Rhamnus crocea*; *Cercis*; *Coprosma*, etc.

1262. *Aspidiotus sacchari* Ckll.

Aspidiotus sacchari Ckll., Journ. Inst. Jam., i, p. 255 (1893).

“ “ “ Ins. Life, vi, p. 103 (1893).

“ “ “ Bull. 6, T. s., Dep. Ag., p. 25 (1897).

“ “ “ “ Bot. Dep. Jam., p. 150 (1897).

“ (*Aspidiella*) *sacchari* Leon., Riv. Pat. Veg., vi, p. 232 (1898).

“ “ “ “ Gen. e Spec. Diaspiti, Asp., p. 58 (1900).

“ *sacchari* Ckll., Ent. News, xiii, p. 24 (1902).

Habitat.—Jamaica; Barbados; Antigua; Java.

On sugar-cane.

1263. *Aspidiotus simillimus* Ckll.

Aspidiotus transparens subsp. *simillimus* Ckll., Ann. Mag. N. H., (7), ii, p. 27 (1898).

“ *simillimus* Ckll., in litt. (1902).

Habitat.—Australia.

On palm.

Aspidiotus simillimus translucens Ckll. in litt., new name.

Aspidiotus lataniæ Green, Cocc. Ceylon, pt. i, p. 49 (1896) in part.

“ *transparens* Ckll., Bull. 6, T. s., Dep. Ag., p. 28 (1897).

“ “ Green, Jn. Bomb. N. H. Soc., xiii, p. 69 (1899).

“ (*Evaspidiotus*) *transparens* Ckll., The Entom., xxxii, p. 93 (1899).

“ “ “ Leon., Gen. e Spec. Diaspiti, Asp., p. 96 (1900).

Habitat.—Hawaiian Islands; Ceylon.

On tea; *Loranthus*; *Dalbergia championii*.

1264. *Aspidiotus sophoræ* Mask.

Aspidiotus sophoræ Mask., N. Z. Trans., xvi, p. 121 (1883).

“ “ “ Ins. Nox. Agr. N. Z., p. 45 (1887).

“ “ Ckll., Bull. 6, T. s., Dep. Ag., p. 25 (1897).

Habitat.—New Zealand.

On *Sophora tetraptera*.

1265. *Aspidiotus spinosus* Comst.

Aspidiotus spinosus Comst., 2nd Rep. Dep. Ent. Corn. Univ., p. 70 (1883).

“ “ Ckll., Can. Ent., xxvii, p. 17 (1895).

“ “ Bull. 6, T. s., Dep. Ag., p. 30 (1897).

“ *cydoniæ* Newst. (non. Comst.), Ent. Mon. Mag., xxxiii, p. 74 (1897).

“ (*Evaspidiotus*) *spinosus* Leon., Riv. Pat. Veg., vii, p. 56 (1898).

“ “ “ “ Gen. e Spec. Diaspiti, Asp., p. 83 (1900).

“ *spinosus* Newst., Mon. Brit. Cocc., i, p. 114 (1901).

Habitat.—Washington, D. C. (in greenhouses); England.

On *Camellia*; *Arenga saccharifera*, from Malay Archipelago.

1266. *Aspidiotus subrubescens* Mask.

Aspidiotus subrubescens Mask., N. Z. Trans., xxiv, p. 9 (1891).

“ “ “ “ “ xxv, p. 207 (1892).

“ “ Ckll., Bull. 6, T. s., Dep. Ag., p. 27 (1897).

“ (*Evaspidiotus*) *subrubescens* Leon., Riv. Pat. Veg., vii, p. 84 (1898).

“ “ “ “ Gen. e Spec. Diaspiti, Asp., p. 111 (1900).

Habitat.—Australia.

On *Banksia*; *Eucalyptus*; *Pittosporum*.

1267. *Aspidiotus subsimilis* Ckll.

Aspidiotus subsimilis Ckll., Ann. Mag. N. H., (7), iii, p. 163 (1899).

“ “ Newell, Contr. Ia. Ag. Coll., No. 3, p. 14 (1899).

Aonidiella “ Leon., Gen. e Spec. Diaspiti, Asp., p. 225 (1900).

Habitat.—Mexico.

On *Cæsalpina palmeri*?

1268. *Aspidiotus townsendi* Ckll.

Aspidiotus townsendi Ckll., Psyche, vii, Suppl., i, p. 20 (1896).

“ “ “ Bull. 4, T. s., Dep. Ag., p. 32 (1896).

“ (*Diaspidiotus*) *townsendi* Ckll., Bull. 6, T. s., Dep. Ag., p. 22 (1897).

“ (*Aspidiella*) “ Leon., Riv. Pat. Veg., vi, p. 230 (1898).

“ “ “ “ Gen. e Spec. Diaspiti, Asp., p. 56 (1900).

Habitat.—Mexico; Arizona.

On ash.

1269. *Aspidiotus tricolor* Ckll.

- Aspidiotus* (Hemiberlesia) *tricolor* Ckll., Can. Ent., xxix, p. 266 (1897).
 " " " Bull. 6, T. s., Dep. Ag., p. 25 (1897).
 " *tricolor* Newell, Contr. Ia. Ag. Coll., No. 3, p. 30 (1899).
 Habitat.—Mexico.

1270. *Aspidiotus ulmi* Johnson.

- Aspidiotus ulmi* Johns., Bull. Ill. St. Lab. N. H., iv, p. 388 (1896).
 " (Hemiberlesia) *ulmi* Ckll., Bull. 6, T. s., Dep. Ag., p. 22 (1897).
 " *ulmi* Hunter, Kan. Univ. Quar., viii, p. 6 (1899).
 " " Newell, Contr. Ia. Ag. Coll., No. 3, p. 28 (1899).
Aonidiella " Leon., Gen. e Spec. Diaspiti, Asp., p. 225 (1900).
 Habitat.—Ill.; Kan.; N. Y.; Japan.
 On elm; Catalpa; *Cycas revoluta*.

1271. *Aspidiotus unilobis* Mask.

- Aspidiotus unilobis* Mask., N. Z. Trans., xxvii, p. 40 (1894).
 " " Newst., Ent. Mon. Mag., xxxi, p. 234 (1895).
 " (*Chentraspis*) *unilobis* Ckll., Bull. 6, T. s., Dep. Ag., p. 27 (1897).
Chentraspis unilobis Leon., Riv. Pat. Veg., vi, p. 111 (1897).
 " " " Gen. e Spec. Diaspiti, Asp., p. 10 (1900).
 Habitat.—Australia.
 On Acacia.

1272. *Aspidiotus uvæ* Comst.

(*The Grape scale*.)

- Aspidiotus uvæ* Comst., Rep. U. S. Dep. Ag., 1880, p. 309 (1881).
 " " Targ., Annali di Agr., p. 389 (1884).
 " " How., Ins. Life, vii, p. 53 (1894).
 " (*Diaspidiotus*) *uvæ* Ckll., Bull. 6, T. s., Dep. Ag., p. 22 (1897).
 " " " Leon., Riv. Pat. Veg., vi, p. 218 (1898).
 " *uvæ* Chambliss, Bull. 4, Tenn. Exp. Sta., p. 149 (1898).
 " " Newell, Contr. Ia. Ag. Coll., No. 3, p. 12 (1899).
 " (*Diaspidiotus*) *uvæ* Leon., Gen. e Spec. Diaspiti, Asp., p. 44 (1900).
 " *uvæ* Forbes, Circ. 36, Ill. Exp. Sta., p. 26 (1901).
 " " Banks, Bull. 34, n. s., Dep. Ag., p. 20 (1902).
 " " Forbes, 22nd Rep. Ins. Ill., p. 120 (1903).
 Habitat.—Ohio; Ill.; Ind.; Tenn.; Kan.; Fla.; Jamaica; Europe.
 On grape-vine; hickory.

1273. *Aspidiotus vagabundus* Ckll.

- Aspidiotus vagabundus* Ckll., Biol. Centr. Amer., ii, pt. 2, p. 20 (1899).
 Habitat.—Mexico.
 On bark of ash.

1274. *Aspidiotus virescens* Mask.

- Aspidiotus virescens* Mask., N. Z. Trans., xxviii, p. 384 (1896).
 " " Ckll., Bull. 6, T. s., Dep. Ag., p. 27 (1897).

Aspidiotus (Evaspidiotus) virescens Leon., Riv. Pat. Veg., vii, p. 64 (1898).
 “ “ “ “ Gen. e Spec. Diaspiti, Asp., p.
 91 (1900).

Habitat.—Australia.

On *Eugenia Smithii*.

1275. *Aspidiotus vitiensis* Mask.

Aspidiotus vitiensis Mask., N. Z. Trans., xxvii, p. 40 (1894).

“ “ Ckll., Bull. 6, T. s., Dep. Ag., p. 25 (1897).

Habitat.—Fiji.

On “various forest trees.”

1276. *Aspidiotus zonatus* Frauenf.

Aspidiotus zonatus Frauenf., Verh. z. b. Ges. Wien, p. 888 (1868).

“ *quercus* Sign., Ann. Soc. Ent. Fr., (4), ix, p. 132 (1869).

“ *zonatus* “ “ “ “ “ “ “ p. 135 (1869).

“ “ Bull. “ “ “ (5), vi, p. lxxvi (1876).

“ *quercus* Colvée, Nuev. Estud. Cocc., p. 14 (1882).

“ “ Comst., 2nd Rep. Dep. Ent. Corn. Univ., p. 81 (1883).

“ *zonatus* “ “ “ “ “ “ “ p. 85 (1883).

“ “ Witlaczil, Zur Morph. Anat. Cocc., p. 158 (1885).

“ “ Dougl., Ent. Mon. Mag., xxiii, p. 150 (1886).

“ “ Morg., “ “ “ xxiv, p. 205 (1888).

“ “ Newst., “ “ “ xxix, p. 279 (1893).

“ “ Green, “ “ “ xxxi, p. 230 (1895).

“ (*Aspidiotus*) *zonatus* Ckll., Bull. 6, T. s., Dep. Ag., p. 19 (1897).

“ (*Aspidiella*) “ Leon., Riv. Pat. Veg., vi, p. 224 (1898).

“ “ “ “ Gen. e Spec. Diaspiti, Asp., p. 50
 (1900).

“ *zonatus* Newst., Mon. Brit. Cocc., i, p. 94 (1901).

Habitat.—Europe.

On oak.

Genus *CRYPTOPHYLLASPIS* Ckll. Type, *occultus*.

s. g. *Cryptophyllaspis* Ckll., Bull. 6, T. s., Dep. Ag., p. 14 (1897); g. Check
 List, Suppl., p. 396 (1899).

1277. *Cryptophyllaspis liquidambaris* Kotinsky.

Cryptophyllaspis liquidambaris Kotins., Pr. Ent. Soc. Wash., v, p. 149 (1903).

Habitat.—Washington, D. C.; Atlanta, Ga.

On *Liquidambar styraciflua*.

1278. *Cryptophyllaspis occultus* (Green).

Aspidiotus occultus Green, Ind. Mus. Notes, iv, p. 4 (1896).

“ “ “ Cocc. Ceylon, pt. 1, p. 56 (1896).

“ “ “ Ckll., Bull. 6, T. s., Dep. Ag., p. 14 (1897).

Hemiberlesia “ Leon., Riv. Pat. Veg., vi, p. 129 (1898).

Cryptophyllaspis occultus Ckll., Check List, Suppl., p. 396 (1899).

Habitat.—Ceylon.

On *Grewia orientalis*.

1279. *Cryptophyllaspis rubsaameni* Ckll.

Cryptophyllaspis rubsaameni Ckll., Ann. Mag. N. H., (7), ix, p. 26 (1902).

“ “ “ Can. Ent., xxxiv, p. 75 (1902).

Habitat.—Bismarck Archipelago.

On *Codiaeum*.

Genus **MASKELLIA** Full. Type, *globosa*.

Maskellia Full., Ag. Gaz. N. S. W., viii, p. 579 (1897).

1280. *Maskellia globosa* Full.

Maskellia globosa Full., Notes on Cocc. W. Austr., p. 5 (1897).

“ “ “ Ag. Gaz. N. S. W., viii, p. 579 (1897).

Habitat.—W. Australia.

On *Eucalyptus gomphocephala*.

Genus **MORGANELLA** Ckll. Type, *maskelli*.

s. g. *Morganella* Ckll., Bull. 6, T. s., Dep. Ag., p. 22 (1897); g. in litt. (1902).

1281. *Morganella longispina* (Morg.).

Aspidiotus longispina Morg., Ent. Mon. Mag., xxv, p. 352 (1889).

A. (*Morganella*) *longispinus* Ckll., Bull. 6, T. s., Dep. Ag., p. 24 (1897).

Hemiberlesia “ Leon., Riv. Pat. Veg., vi, p. 120 (1897).

“ “ Berl. e Leon., Annali di Agr., p. 111 (1898).

“ “ Leon., Gen. e Spec. Diaspiti, Asp., p. 19 (1900).

Habitat.—Demerara.

On *Cupania sapida*.

1282. *Morganella maskelli* (Ckll.).

Aspidiotus longispina Mask. (non Morg.), N. Z. Trans., xxvii, p. 38 (1894).

A. (*Morganella*) *maskelli* Ckll., Bull. 6, T. s., Dep. Ag., p. 22 (1897).

Aspidiotus maskelli var. *ornatus* Mask., N. Z. Trans., xxx, p. 225 (1898).

“ “ de Charm., Pr. Soc. Amic. Scien., p. 24 (1899).

“ (*Morganella*) *maskelli* Hemp., Rev. Mus. Paul., iv, p. 498 (1900).

“ *maskelli* Kirkaldy, Fauna Haw., iii, pt. 2, p. 107 (1902).

Habitat.—Hawaiian Islands; Mauritius; Brazil.

On *Michelia flava*; *Camellia*.

Genus **COMSTOCKIELLA** Ckll. Type, *sabalis*.

Comstockiella Ckll., Check List, Coccidæ, p. 320 (1896).

1283. *Comstockiella sabalis* (Comst.).

(*Palmetto scale*.)

Aspidiotus sabalis Comst., 2nd Rep. Dep. Ent. Corn. Univ., p. 67 (1883).

Comstockiella sabalis Ckll., Check List, p. 335 (1896).

" " var. Ckll., Jn. N. Y. Ent. Soc., vii, p. 257 (1899).

Habitat.—Florida; Guadaloupe Island.

On palmetto; *Erythea edulis*.

Comstockiella sabalis mexicana Ckll.

Comstockiella sabalis var. *mexicana* Ckll., Can. Ent., xxix, p. 267 (1899).

Habitat.—Mexico.

On palms.

Genus **PSEUDAONIDIA** Ckll. Type, duplex.

s. g. *Pseudaonidia* Ckll., Bull. 6, T. s., Dep. Ag., p. 14 (1897); g. The Entom., xxxiv, p. 226 (1901).

1284. *Pseudaonidia clavigera* Ckll.

Pseudaonidia clavigera Ckll., The Entom., xxxiv, p. 226 (1901).

Habitat.—Natal.

On Camellia.

1285. *Pseudaonidia duplex* (Ckll.).

Aspidiotus duplex Ckll., Psyche, vii, Suppl., i, p. 20 (1896).

" " " Bull. 4, T. s., Dep. Ag., p. 52 (1896).

" " " Craw, 5th Bien. Rep. Cal. Bd. Hort., p. 33 (1896).

" (*Pseudaonidia duplex* Ckll., Bull. 6, T. s., Dep. Ag., pp. 14, 20 (1897).

" (*Evaspidiotus*) " Leon., Riv. Pat. Veg., vii, p. 173 (1899).

" " " Gen. e Spec. Diaspiti, Asp., p. 113 (1900).

" *duplex* Kuw., Pr. Cal. Ac. Sci., (3), iii, p. 66 (1902).

Habitat.—Japan; Hawaiian Islands; Washington, D. C.; California (in Japanese nursery).

On Camellia; orange; camphor-tree; tea; *Olea fragrans*; *Rhus succedanea*; *Azalea*; *Rhododendron*; *Myrica rubra*; *Eurya ochnacea*.

1286. *Pseudaonidia pæoniæ* (Ckll.).

Aspidiotus duplex var. *pæoniæ* Ckll., Can. Ent., xxxi, p. 105 (1899).

" " " " Kuw., Pr. Cal. Ac. Sci., (3), iii, p. 66 (1902).

Pseudaonidia pæoniæ Ckll., in litt. (1902).

Habitat.—California; Japan.

On peony from Japan; *Camellia japonica*; *Rhododendron*; *Ilex latifolia*; *Thea japonica*.

1287. *Pseudaonidia rhododendri* (Green).

Aspidiotus theæ var. *rhododendri* Green, Jn. Bomb. N. H. Soc., xiii, p. 67 (1900).

Habitat.—India.

On *Rhododendron*.

Pseudaonidia rhododendri thearum Ckll. in litt., new name.

Aspidiotus theæ Mask. (non Green), Ind. Mus. Notes, ii, p. 59 (1891).

" " " " " N. Z. Trans., xxiv, p. 11 (1891).

" " " " " " xxv, p. 207 (1892).

- Aspidiotus (*Pseudaonidia*) theæ Ckll., Bull. 6, T. s., Dep. Ag., p. 28 (1897).
 " (Evaspidiotus) " Leon., Riv. Pat. Veg., vii, p. 80 (1898).
 " " " " Gen. e Spec. Diaspiti, Asp., p. 107 (1900).
Pseudaonidia rhododendri thearum Ckll., in litt. (1902).
 Habitat.—India.
 On tea.

1288. *Pseudaonidia tesserata* (de Charm.).

- Aspidiotus (*Diaspidiotus*) *tesseratus* de Charm., Pr. Soc. Amic. Scien., p. 23 (1899).
 " *tesseratus* Ckll., Biol. Centr. Amer., ii, pt. 2, p. 24 (1899).
Pseudaonidia " " Am. Nat., xxxiii, p. 900 (1899).
 Aspidiotus (*Pseudaonidia*) *tesseratus* Lefroy, West Indian Bulletin, iii, No. 3, p. 247 (1902).
 Habitat.—Mauritius; Mexico; Antigua.
 On *Malvaviscus*; grape-vine.

1289. *Pseudaonidia trilobitiformis* (Green).

- Aspidiotus *trilobitiformis* Green, Ind. Mus. Notes, iv, p. 4 (1896).
 " " " Cocc. Ceylon, pt. 1, p. 41 (1896).
 " (*Pseudaonidia*) *trilobitiformis* Ckll., Bull. 6, T. s., Dep. Ag., p. 28 (1897).
 " (*Evaspidiotus*) " Leon., Riv. Pat. Veg., vii, p. 82 (1898).
 " *trilobitiformis* Ckll., Psyche, viii, p. 312 (1899).
 " " de Charm., Pr. Soc. Amic. Scien., p. 26 (1899).
 " (*Pseudaonidia*) *trilobitiformis* Hemp., Rev. Mus. Paul., iv, p. 499 (1900).
 " (*Evaspidiotus*) " Leon., Gen. e Spec. Diaspiti, Asp., p. 109 (1900).
Pseudaonidia trilobitiformis Ckll., Ann. Mag. N. H., (7), ix, p. 456 (1902).
 Habitat.—East Indies; Ceylon; Mauritius; Japan; Brazil.
 On *Dalbergia championii*; Myrtaceæ; *Ficus scandens*.

***Pseudaonidia trilobitiformis darutyi* (de Charm.).**

- Aspidiotus *darutyi* de Charm., Bull. Soc. Ent. Fr., lxvii, p. 278 (1898).
 " " " Revue Agricole, July 30, p. 2 (1898).
 Habitat.—Mauritius; Seychelles; Liberia.
 On *Mangifera indica*; *Murraya exotica*; *Euphoria longana*.

Genus *SELENASPIDUS* Ckll. Type, articulatus.

- s. g. *Selenaspidus* Ckll., Bull. 6, T. s., Div. Ent. Dep. Ag., p. 14 (1897); g. in litt. (1902).
 s. g. *Selenaspis* Leon., Riv. Pat. Veg., vi, p. 211 (1898).

1290. *Selenaspidus articulatus* (Morg.).

(*Rufous scale*.)

- Aspidiotus *articulatus* Morg., Ent. Mon. Mag., xxv, p. 352 (1889).
 " " Ckll., Journ. Inst. Jam., i, p. 54 (1892).

- Aspidiotus articulatus* Ckll., Jn. Trin. Nat. Club, p. 307 (1894).
 " " " Scale Ins. Trinidad, p. 5 (1895).
 " " Green, Ent. Mon. Mag., xxxii, p. 200 (1896).
 " (*Selenaspidus*) *articulatus* Ckll., Bull. 6, T. s., Dep. Ag., pp. 14, 23 (1897).
 " (*Selenaspis*) " Leon., Riv. Pat. Veg., vi, p. 211 (1898).
 " " " " Gen. e Spec. Diaspiti, Asp., p. 37 (1900).
 " (*Selenaspidus*) *articulatus* Hemp., Rev. Mus. Paul., iv, p. 499 (1900).
 " *articulatus* Ckll., Ent. Mon. Mag., xxxvii, p. 171 (1901).
 " " Lefroy, Scale Ins. Less. Antil., p. 51 (1901).
 " " Newst., Mon. Brit. Cocc., i, p. 128 (1901).

Habitat.—England (in greenhouses); W. Africa; Demerara; Brazil; W. Indies; Costa Rica; Panama; Mexico.

On Pandanus; *Dictyosperma album*; *Cordyline terminalis*; orange; lime; coffee; *Gardenia*; *Ficus*, etc.

***Selenaspidus articulatus celastri* (Mask.).**

Aspidiotus articulatus var. *celastri* Mask., N. Z. Trans., xxix, p. 297 (1897).

Habitat.—Cape of Good Hope.

On *Celastrus laurinus*.

***Selenaspidus articulatus simplex* (de Charm.).**

Aspidiotus articulatus var. *simplex* de Charm., Pr. Soc. Amic. Scien., p. 20 (1899).

Habitat.—Mauritius.

Genus *CHRYSOMPHALUS* Ashm. Type, *ficus*.

Chrysomphalus Ashm., Am. Ent., iii, p. 268 (1880); Orange Ins., p. 21 (1880):

Leon., Riv. Pat. Veg., vii, p. 198 (1899).

Aonidiella Berl. e Leon., Riv. Pat. Veg., iv, p. 77 (1895) and vii, p. 174 (1899).

Type, *aurantii*.

s. g. *Melanaspis* Ckll., Bull. 6, T. s., Dep. Ag., p. 9 (1897). Type, *obscurus*.

s. g. *Mycetaspis* " " " " " " " " p. 9 (1897). Type, *personatus*.

Insaspidiotus Barreda, Boll. Com. Parasit. Agr., i, p. 229 (1901).

1291. *Chrysomphalus agavis* (Townsend & Ckll.).

Aspidiotus agavis Towns. & Ckll., Jn. N. Y. Ent. Soc., vi, p. 178 (1898).

Chrysomphalus agavis Ckll., Check List, Suppl., p. 396 (1899).

Insaspidiotus " Barreda, Boll. Com. Parasit. Agr., i, p. 229 (1901).

Chrysomphalus " Ckll., Ent. News, xiii, p. 15 (1902).

Habitat.—Mexico.

On Agave.

1292. *Chrysomphalus albopictus* (Ckll.).

Aspidiotus (*Chrysomphalus*) *albopictus* Ckll., Ann. Mag. N. H., (7), i, p. 433 (1898).

Habitat.—Mexico.

On leaves of orange.

- Aspidiotus (*Chrysomphalus*) *ficus* Kll., Bull. 6, T. s., Dep. Ag., p. 23 (1897).
 " *ficus* Osborn, Contr. Ia. Ag. Coll., No. 3, p. 7 (1898).
 " " Berl. e Leon., Annali di Agr., p. 113 (1899).
 " " de Charm., Pr. Soc. Amic. Scien., p. 25 (1899).
Chrysomphalus ficus Leon., Riv. Pat. Veg., vii, p. 211 (1899).
 " " Pettit, Bull. 43, Ia. Exp. Sta., p. 166 (1899).
 " *aonidium* Ckll., Biol. Centr. Amer., ii, pt. 2, p. 25 (1899).
Aspidiotus (*Chrysomphalus*) *aonidium* Hemp., Rev. Mus. Paul., iv, p. 502 (1900).
 " *ficus* Luger, 6th Rep. Minn. Exp. Sta., p. 225 (1900).
 " " Marlatt, Yearbook U. S. Dep. Ag., p. 269 (1900).
 " " Quaint. & Scott, Cocc. Amer., Dec. iii-iv, No. 11 (1901).
 " " Lefroy, Scale Ins. Less. Antil., p. 53 (1901).
 " " Full., 1st Rep. Ent. Natal, p. 100 (1901).
 " " Zimm., Bull. Inst. Bot. Buitenzorg, No. 10, p. 19 (1901).
 " " Newst., Mon. Brit. Cocc., i, p. 104 (1901).
 " (*Chrysomphalus*) *ficus* Kuw., Pr. Cal. Ac. Sci., (3), iii, p. 71 (1902).
 Habitat.—Europe; Egypt; Ceylon; India; Mauritius; Natal; Australia;
 Japan; Brazil; Jamaica; Barbados; New York; Washington, D. C.; Ga.;
 Fla.; La.; Texas; Ohio; Col.; N. Mex.; Cal.; Mexico.
 On orange; lemon; cocoanut; banana; camphor-tree; palms; rose; *Ilex*
latifolia; *I. lurida*; *Camellia*; *Dictyosperma album*; *Rhododendron arbo-*
reum; guava; grape-fruit; *Ficus nitida*; oleander; *Begonia magnifica*, etc.

1295. *Chrysomphalus aurantii* (Mask.).

(*Red scale of California.*)

- Aspidiotus aurantii* Mask., N. Z. Trans., xi, p. 199 (1878).
 " " Comst., Rep. U. S. Dep. Ag., 1880, p. 293 (1881).
 " *citri* " Can. Ent., xiii, p. 8 (1881).
 " *coccineus* Genn., Ann. Soc. Ent. Fr., (6), i, p. 189 (1881).
Aonidia gennadii Targ., Annali di Agr., p. 151 (1881).
Aspidiotus aurantii Mask., N. Z. Trans., xvi, p. 120 (1883).
 " " Comst., 2nd Rep. Dep. Ent. Corn. Univ., p. 59 (1883).
 " " Saund., Ins. Inj. to Fruits, p. 395 (1883).
Aonidia " Targ., Annali di Agr., pp. 383, 386 (1884).
Aspidiotus aurantiæ Hubbard, Ins. Aff. Orange, p. 32 (1885).
 " *aurantii* Mask., Ins. Nox. Ag. N. Z., p. 42 (1887).
 " *coccineus* " " " " " p. 42 (1887).
 " *gennadii* Penzig, Studi bot. sug. Agr., p. 497 (1887).
 " *aurantii* Coq., Bull. 22, Div. Ent. Dep. Ag., p. 10 (1890).
 " " Mask., N. Z. Trans., xxiv, p. 12 (1891).
Aonidia " Craw, Rep. Cal. Bd. Hort., p. 12 (1891).
Aspidiotus " Coq., Bull. 26, Div. Ent. Dep. Ag., p. 14 (1892).
 " " Mask., N. Z. Trans., xxv, p. 206 (1892).
 " " Morg., Spec. Bull. La. Exp. Sta., p. 74 (1893).
 " *coccineus* French, Handb. Destr. Ins. Victoria, p. 53 (1893).

- Aspidiotus aurantii* Mask., N. Z. Trans., xxvii, p. 40 (1894).
 " " Lounsb., Rep. Ent. Cape Good Hope, p. 41 (1895).
Aonidia " Saccardo, Riv. Pat. Veg., iv, p. 51 (1895).
Aonidiella " Berl., " " " " p. 83 (1895).
 " " Berl. e Leon., Cherm. Ital., Fasc. i, No. 23 (1895).
Aspidiotus " Green, Cocc. Ceylon, pt. i, p. 58 (1896).
 " *coccineus* Risso, Hist. Nat. Oranges, p. 81 (1896).
 " *aurantii* Frog., Dep. Ag. N. S. W., No. 175, p. 2 (1897).
Aonidia " Starnes, Bull. 36, Ga. Exp. Sta., p. 23 (1897).
A. (Aonidiella) " Ckll., Bull. 6, T. s., Dep. Ag., pp. 13, 29 (1897).
 " " " Allen, Ag. Gaz. N. S. W., ix, p. 618 (1898).
Chrysomphalus " Ckll., Check List, Suppl., p. 396 (1899).
Aspidiotus " de Charm., Pr. Soc. Amic. Scien., p. 22 (1899).
 " " Lounsb., Rep. Ent. Cape Good Hope, p. 23 (1900).
Chrysomphalus " Marlatt, Yearbook U. S. Dep. Ag., p. 268 (1900).
Aonidiella " Leon., Gen. e Spec. Diaspiti, Asp., p. 124 (1900).
Aspidiotus " Newst., Mon. Brit. Cocc., i, p. 88 (1901).
 " " Full., 1st Rep. Ent. Natal, p. 99 (1901).
 " (*Chrysomphalus aurantii* Kuw., Pr. Cal. Ac. Sci., (3), iii, p. 70 (1902).
 Habitat.—S. Europe; Syria; Natal; Cape Colony; Mauritius; Ceylon;
 China; Japan; Australia; New Zealand; New Caledonia; Samoa; Fiji;
 Hawaiian Islands; West Indies; New York; Florida; Ohio; California.
 On orange; lemon; cocoa-nut; fig; olive; agave; plum; lignum-vitæ;
 Buxus; Euonymus japonicus; Pistacia; rose; pear; quince; apple; willow;
 oak; grape, etc.

***Chrysomphalus aurantii citrinus* (Coq.).**

- Aspidiotus citrinus* Coq., Bull. 23, Div. Ent. Dep. Ag., p. 29 (1891).
 " " Craw, Rep. Cal. Bd. Hort., p. 10 (1891).
 " " Riley & How., Ins. Life, v, p. 281 (1893).
 " " Morg., Spec. Bull. La. Exp. Sta., p. 75 (1893).
 " " Craw, 4th Bien. Rep. Cal. Bd. Hort., p. 97 (1894).
 " *aurantii* var. *citrinus* Howard, Ins. Life, vi, p. 228 (1894).
A. (Aonidiella) aurantii var. *citrinus* Ckll., Bull. 6, T. s., Dep. Ag., p. 29 (1897).
Aonidiella " " " Leon., Riv. Pat. Veg., vii, p. 187 (1899).
Aspidiotus citrinus Lounsb., Rep. Ent. Cape Good Hope, p. 25 (1900).
 " " Marlatt, Yearbook U. S. Dep. Ag., p. 269 (1900).
 Habitat.—California; Japan.
 On orange; Euonymus; Aucuba.

1296. *Chrysomphalus bififormis* (Ckll.).

- Aspidiotus bififormis* Ckll., Gard. Chron., (3), xiii, p. 548 (1893).
 " " " Can. Ent., xxvi, p. 131 (1894).
 " " " Bull. Bot. Dep. Jam., p. 151 (1897).
 " (*Chrysomphalus*) *bififormis* Ckll., Bull. 6, T. s., Dep. Ag., pp. 13,
 23 (1897).
 " (*Evaspidiotus*) " Leon., Riv. Pat. Veg., vii, p. 60 (1898).

Chrysomphalus biformis Ckll., Biol. Centr. Amer., ii, pt. 2, p. 26 (1899).
Aspidiotus (Evaspidiotus) biformis Ckll., Gen. e Spec. Diaspiti, Asp., p. 87 (1900).

Habitat.—Central America; Jamaica; Trinidad; Grenada; Antigua.
 On orchids.

***Chrysomphalus biformis cattleyæ* (Ckll.).**

Aspidiotus biformis var. *cattleyæ* Ckll., Gard. Chron., (3), xiii, p. 548 (1893).
A. (Chrysomphalus) biformis var. *cattleyæ* Ckll., Bull. 6, T. s., Dep. Ag., p. 23 (1897).

Habitat.—Jamaica.
 On *Cattleya Bowringiana*.

1297. *Chrysomphalus bromeliæ* ("Newst.," Leon.).

Aonidiella bromeliæ Leon., Riv. Pat. Veg., vii, p. 177 (1899).
 " " " Gen. e Spec. Diaspiti, Asp., p. 115 (1900).
Aspidiotus " Newst., Mon. Brit. Cocc., i, p. 86 (1901).
Chrysomphalus bromeliæ Ckll., in litt. (1901-1902).

Habitat.—England.
 On pine-apple (from Canary Islands?).

1298. *Chrysomphalus calurus* (Ckll.).

Aspidiotus (Chrysomphalus) calurus Ckll., Ann. Mag. N. H., (7), i, p. 440 (1898).
Chrysomphalus calurus Ckll., Biol. Centr. Amer., ii, pt. 2, p. 27 (1899).

Habitat.—Mexico.
 On *Cratægus*.

1299. *Chrysomphalus cladii* (Mask.).

Aspidiotus cladii Mask., N. Z. Trans., xxiii, p. 3 (1890).
 " " " " " xxv, p. 205 (1892).
 " " " " " xxvi, p. 67 (1893).
 " " " " " xxviii, p. 385 (1896).
A. (Chrysomphalus) cladii Ckll., Bull. 6, T. s., Dep. Ag., pp. 13, 26 (1897).
Aspidiotus " de Charm., Pr. Soc. Amic. Scien., p. 22 (1899).
Aonidiella " Leon., Riv. Pat. Veg., vii, p. 195 (1899).
 " " " Gen. e Spec. Diaspiti, Asp., p. 150 (1900).

Habitat.—Australia; Natal; Mauritius.
 On *Cladium*; *Lepidosperma*; *Xerotes*; sedges; aloe.

1300. *Chrysomphalus dictyospermi* (Morg.).

Aspidiotus dictyospermi Morg., Ent. Mon. Mag., xxv, p. 352 (1889).
 " " " " " xxix, p. 185 (1893).
 " " " Ckll., Can. Ent., xxvi, p. 128 (1894).
 " " " Mask., N. Z. Trans., xxvii, p. 44 (1894).
A. (Chrysomphalus) dictyospermi Ckll., Bull. 6, T. s., Dep. Ag., p. 23 (1897).
Aspidiotus " Barlow, Ind. Mus. Notes, iv, p. 119 (1899).

Chrysomphalus dictyospermi Leon., Riv. Pat. Veg., vii, p. 218 (1899).

“ “ “ Gen. e Spec. Diaspiti, Asp., p. 173 (1900).

“ “ Ckll., Ent. Mon. Mag., xxxvi, p. 157 (1900).

Aspidiotus (Chrysomphalus) dictyospermi Hemp., Rev. Mus. Paul., iv, p. 505 (1900).

“ *dictyospermi* Lefroy, Scale Ins. Less. Antil., p. 56 (1901).

Habitat.—China; Demerara; Brazil; West Indies; Mexico; United States (in greenhouses).

On *Dictyospermum album*; *Erythrina indica*; *Cycas*; *Latania*; palms; rose; mango, etc.

***Chrysomphalus dictyospermi pinnulifera* (Mask.).**

Diaspis pinnulifera Mask., N. Z. Trans., xxiii, p. 4 (1890) female.

“ “ “ “ “ xxv, p. 208 (1892).

“ “ “ “ “ xxvii, p. 44 (1894).

“ “ Ckll., Can. Ent., xxvi, p. 129 (1894).

Aspidiotus dictyospermi var. *jamaicensis* Ckll., Can. Ent., xxvi, p. 129 (1894).

Chrysomphalus minor Berl. e Leon., Riv. Pat. Veg., iv, p. 346 (1896).

A. (*Chrysomphalus*) “ Ckll., Bull. 6, T. s., Dep. Ag., p. 30 (1897).

A. “ *dictyospermi* var. *jamaicensis* Ckll., Bull. 6, T. s., Dep. Ag., p. 23 (1897).

Chrysomphalus minor Leon., Riv. Pat. Veg., vii, p. 214 (1899).

“ “ “ Gen. e Spec. Diaspiti, Asp., p. 169 (1900).

Diaspis pinnulifera Green, Ind. Mus. Notes, v, p. 2 (1900).

“ “ Ckll., Ent. Mon. Mag., xxxvi, p. 157 (1900).

Habitat.—Demerara; Fiji; Italy; Jamaica.

On *Croton*; *Cycas*; rose; mango; *Pandanus graminifolius*.

***Chrysomphalus dictyospermi arecæ* (Newst.).**

Aspidiotus dictyospermi var. *arecæ* Newst., Ent. Mon. Mag., xxix, p. 185 (1893).

“ “ “ “ Barlow, Ind. Mus. Notes, iv, p. 119 (1899).

Chrysomphalus “ “ “ Leon., Riv. Pat. Veg., vii, p. 218 (1899).

Aspidiotus “ “ “ Newst., Mon. Brit. Cocc., i, p. 107 (1901).

Habitat.—India; Demerara; Brazil; England; West Indies.

On *Areca triandra*; *Cypripedium*; *Dendrobium*; *Anthurium*; *Aloe zeyheri*; tea.

***Chrysomphalus dictyospermi mangiferæ* (Ckll.).**

Aspidiotus mangiferæ Ckll., Journ. Inst. Jam., i, p. 255 (1893).

“ “ “ Can. Ent., xxvi, p. 129 (1894).

“ “ “ Rev. Mus. Paul., ii, p. 68 (1897).

A. (*Chrysomphalus*) *mangiferæ* Ckll., Bull. 6, T. s., Dep. Ag., p. 24 (1897).

Chrysomphalus “ Leon., Riv. Pat. Veg., vii, p. 215 (1899).

“ *dictyospermi* var. *mangiferæ* Ckll., Check List, Suppl., p. 396 (1899).

Habitat.—Jamaica.

On Mango.

1301. Chrysomphalus kelloggi (Kuwana).

Aspidiotus (Chrysomphalus) kelloggi Kuw., Pr. Cal. Ac.Sci., (3), iii, p. 71 (1902).

Habitat.—Japan.

1302. Chrysomphalus koebelei (Townsend & Ckll.).

Aspidiotus koebelei Townsend & Ckll., Jn. N. Y. Ent. Soc., vi, p. 179 (1898).

Chrysomphalus “ Ckll., Check List, Suppl., p. 396 (1899).

Habitat.—Mexico.

On orange.

1303. Chrysomphalus lilacinus (Ckll.).

Aspidiotus lilacinus Ckll., Ann. Mag. N. H., (7), ii, p. 26 (1898).

Chrysomphalus “ “ Biol. Centr. Amer., ii, pt. 2, p. 27 (1899).

Habitat.—Mexico.

On various species of oak.

1304. Chrysomphalus mimosæ (Comstock).

(*Mimosa scale*.)

Aspidiotus mimosæ Comstock, 2nd Rep. Dep. Ent. Corn. Univ., p. 62 (1883).

A. (Chrysomphalus) mimosæ Ckll., Bull. 6, T. s., Dep. Ag., p. 24 (1897).

Aonidiella “ Leon., Riv. Pat. Veg., vii, p. 181 (1899).

Chrysomphalus “ Ckll., Biol. Centr. Amer., ii, pt. 2, p. 26 (1899).

Aonidiella “ Leon., Gen. e Spec. Diaspiti, Asp., p. 121 (1900).

Habitat.—Mexico.

On Mimosa.

1305. Chrysomphalus obscurus (Comstock).

Aspidiotus obscurus Comstock, Rep. U. S. Dep. Ag., 1880, p. 303 (1881).

“ “ Pack., 5th Rep. U. S. Ent. Com., p. 101 (1890).

A. (Melanaspis) “ Ckll., Bull. 6, T. s., Dep. Ag., pp. 13, 21 (1897).

Aspidiotus “ Rolfs & Quaint., Cocc. Amer., Dec. i-ii, No. 16 (1898).

Chrysomphalus “ Leon., Riv. Pat. Veg., vii, p. 205 (1899).

Aspidiotus “ Hunter, Kan. Univ. Quar., viii, p. 7 (1899).

“ “ “ “ “ “ ix, p. 107 (1900).

Chrysomphalus “ Leon., Gen. e Spec. Diaspiti, Asp., p. 160 (1900).

Habitat.—Washington, D. C.; Florida; Ohio; Illinois; Kansas.

On oak; hickory; grape-vine.

1306. Chrysomphalus odontoglossi (Ckll.).

Aspidiotus bififormis var. odontoglossi Ckll., Gard. Chron., (3), xiii, p. 548 (1893).

“ “ “ “ “ Bull. 6, T. s., Dep. Ag., p. 23 (1897).

“ odontoglossi Leon., Gen. e Spec. Diaspiti, Asp., p. 89 (1900).

Habitat.—Jamaica.

On Odontoglossum grande.

1307. Chrysomphalus paulistus (Hemp.).

Aspidiotus (Chrysomphalus) paulistus Hemp., Rev. Mus. Paul., iv, p. 504 (1900).
 Chrysomphalus " Ckll., Ann. Mag. N. H., (7), viii, p.
 107 (1901).

Habitat.—Brazil.

On Laurus.

1308. Chrysomphalus perseæ (Comst.).

Aspidiotus perseæ Comst., Rep. U. S. Dep. Ag., 1880, p. 305 (1881).

" " Ckll., Bull. 4, T. s., Dep. Ag., p. 33 (1896).

A. (Chrysomphalus) perseæ Ckll., Bull. 6, T. s., Dep. Ag., p. 22 (1897).

Aspidiotus " " Psyche, viii, p. 90 (1897).

" " Rolfs & Quaint., Cocc. Amer., Dec. i-ii, No. 17
 (1898).

Chrysomphalus " Leon., Riv. Pat. Veg., vii, p. 223 (1899).

" " Ckll., Biol. Centr. Amer., ii, pt. 2, p. 25 (1899).

" " Leon., Gen. e Spec. Diaspiti, Asp., p. 178 (1900).

Aspidiotus " Newst., Mon. Brit. Cocc., i, p. 112 (1901).

Habitat.—Florida; Mexico; Kew Gardens, England.

On Persea carolinensis; Magnolia glauca; M. grandiflora; Anthurium
 Harrisii; Ilex; cocoanut-palm.

1309. Chrysomphalus personatus (Comst.).

(*The Masked scale.*)

Aspidiotus personatus Comst., 2nd Rep. Dep. Ent. Corn. Univ., p. 66 (1883).

" " McIntire, Journ. Quekett Micr. Club, (2), iv, p. 23 (1889).

A. (Mycetaspis) " Ckll., Bull. 6, T. s., Dep. Ag., pp. 13, 24 (1897).

Aonidiella personata Leon., Riv. Pat. Veg., vii, p. 193 (1899).

Chrysomphalus personatus Ckll., Check List, Suppl., p. 396 (1899).

Aspidiotus " " Journ. N. Y. Ent. Soc., vii, p. 258 (1899).

Aonidiella " Leon., Gen. e Spec. Diaspiti, Asp., p. 148 (1900).

Aspidiotus " Lefroy, Scale Ins. Less. Antil., p. 55 (1901).

" " Newst., Mon. Brit. Cocc., i, p. 83 (1901).

Habitat.—West Indies; Mexico; British Guiana; England (in green-
 houses).

On orange; Areca rubra; Sabal; Jasminum; plantain; banana; mango;
 fig; Tillandsia corallina; T. confertiflora; T. saundersii; Anacardium occi-
 dentale, etc. Lists in Ins. Life, v, pp. 159, 160, 245, 246 and vi, pp. 50, 100, 103.

1310. Chrysomphalus phenax Ckll.

Chrysomphalus phenax Ckll., The Entom., xxxiv, p. 225 (1901).

Habitat.—Natal.

On Mimosa.

1311. Chrysomphalus reniformis (Ckll.).

Aspidiotus reniformis Ckll., Can. Ent., xxix, p. 265 (1897).

Chrysomphalus " " Check List, Suppl., p. 396 (1899).

" " " Biol. Centr. Amer., ii, pt. 2, p. 25 (1899).

" " Leon., Gen. e Spec. Diaspiti, Asp., p. 226 (1900).

Habitat.—Mexico.

1312. Chrysomphalus rhizophoræ Ckll.

Chrysomphalus rhizophoræ Ckll., Ann. Mag. N. H., (7), iii, p. 169 (1899).

" " " Biol. Centr. Amer., ii, pt. 2, p. 25 (1899).

" " Leon., Gen. e Spec. Diaspiti, Asp., p. 226 (1900).

Habitat.—Mexico.

On mangrove.

1313. Chrysomphalus rossi (Mask.).

Aspidiotus rossi Mask., N. Z. Trans., xxiii, p. 3 (1890).

" " " " " xxiv, p. 11 (1891).

" " " " " xxv, p. 207 (1892).

" " " " " Craw, 5th Bien. Rep. Cal. Bd. Hort., p. 34 (1896).

" " " " " Green, Cocc. Ceylon, pt. 1, p. 45 (1896).

A. (Chrysomphalus) rossi Ckll., Bull. 6, T. s., Dep. Ag., p. 27 (1897).

Aspidiotus " Mask., N. Z. Trans., xxix, p. 296 (1897).

" " " " " xxx, p. 224 (1898).

Chrysomphalus " Leon., Riv. Pat. Veg., vii, p. 202 (1899).

" " Ckll., Pr. Ac. N. Sci. Ph., p. 274 (1899).

" " Leon., Gen. e Spec. Diaspiti, Asp., p. 157 (1900).

Habitat.—Australia; New Zealand; Philippine Islands; Japan; China; Ceylon; S. Africa.

On Xanthorrhœa; Eucalyptus; Nerium oleander; Capparis moonii; Rhinocarpus; Acacia; Araucaria bidwillii; palms; olive; Abutilon; Artemisia, etc.

Chrysomphalus rossi victoriæ Ckll.

Chrysomphalus rossi victoriæ Ckll., Victorian Naturalist, xvi, p. 8 (1899).

Habitat.—Victoria.

1314. Chrysomphalus scutiformis (Ckll.).

Aspidiotus scutiformis Ckll., Ann. Mag. N. H., (6), xii, p. 48 (1893).

A. (Chrysomphalus) scutiformis Ckll., Bull. 6, T. s., Dep. Ag., p. 25 (1897).

Chrysomphalus " " Biol. Centr. Amer., ii, pt. 2, p. 26 (1899).

Aspidiotus (Chrysomphalus) " Leon., Gen. e Spec. Diaspiti, Asp., p. 177 (1900).

" " " Hemp., Rev. Mus. Paul., iv, p. 503 (1900).

Habitat.—Mexico; Central America.

On Citrus; Avocado pear; Laurus.

1315. Chrysomphalus setiger (Mask.).

Aspidiotus setiger Mask., N. Z. Trans., xxix, p. 298 (1897).

Chrysomphalus“ Ckll., Check List, Suppl., p. 396 (1899).

“ “ Leon., Gen. e Spec. Diaspiti, Asp., p. 165 (1900).

Habitat.—Japan.

On Quercus.

1316. Chrysomphalus smilacis (Comst.).

Aspidiotus smilacis Comst., 2nd Rep. Dep. Ent. Corn. Univ., p. 69 (1883).

A. (Chrysomphalus) smilacis Ckll., Bull. 6, T. s., Dep. Ag., pp. 12, 22 (1897).

Aonidiella “ Leon., Riv. Pat. Veg., vii, p. 182 (1899).

“ “ “ Gen. e Spec. Diaspiti, Asp., p. 122 (1900).

Chrysomphalus “ Kuw., Jn. N. Y. Ent. Soc., x, p. 32 (1902).

Habitat.—Mass.; Galapagos Islands.

On Smilax; Croton?

1317. Chrysomphalus sphærioides (Ckll.).

Aspidiotus sphærioides Ckll., Psyche, vii, Suppl., i, p. 7 (1895).

“ “ “ Craw, 5th Bien. Rep. Cal. Bd. Hort., p. 35 (1896).

A. (Chrysomphalus) sphærioides Ckll., Bull. 6, T. s., Dep. Ag., p. 30 (1897).

Chrysomphalus “ Leon., Riv. Pat. Veg., vii, p. 203 (1899).

“ “ “ Gen. e Spec. Diaspiti, Asp., p. 158 (1900).

Habitat.—Louisiana.

On New Zealand flax (Phormium).

1318. Chrysomphalus tenebricosus (Comst.).

Aspidiotus tenebricosus Comst., Rep. U. S. Dep. Ag., 1880, p. 308 (1881).

“ “ “ Pack., 5th Rep. U. S. Ent. Com., p. 417 (1890).

“ “ “ Craw, Rep. Cal. Bd. Hort., p. 11 (1891).

“ “ “ Lint., 11th Rep. Ins. N. Y., p. 221 (1896).

A. (Chrysomphalus) “ Ckll., Bull. 6, T. s., Dep. Ag., p. 22 (1897).

Aspidiotus “ Rolfs & Quaint., Cocc. Amer., Dec. i-ii, No. 18 (1898).

Aonidiella tenebricosa Leon., Riv. Pat. Veg., vii, p. 178 (1899).

“ “ “ Gen. e Spec. Diaspiti, Asp., p. 119 (1900).

Habitat.—Washington, D. C.; Georgia; California.

On maple; apple.

1319. Chrysomphalus tonilensis Ckll.

Chrysomphalus (Melanaspis) tonilensis Ckll., Ann. Mag. N. H., (7), x, p. 470 (1902).

Habitat.—Mexico.

“On a low bush of the sage family.”

Genus **PSEUDISCHNASPIS** Hemp. Type, linearis.

Pseudischnaspis Hemp., Rev. Mus. Paul., iv, p. 506 (1900).

1320. Pseudischnaspis bowreyi (Ckll.).

Aspidiotus bowreyi Ckll., Journ. Inst. Jam., i, p. 383 (1893).

" " " Ent. News, v, p. 59 (1894).

A. (Chrysomphalus) bowreyi Ckll., Bull. 6, T. s., Dep. Ag., p. 23 (1897).

Chrysomphalus " Leon., Riv. Pat. Veg., vii, p. 220 (1899).

Pseudischnaspis " Ckll., Am. Nat., xxxv, p. 64 (1901).

Habitat.—Jamaica; Mexico.

On Agave rigida.

1321. Pseudischnaspis linearis Hemp.

Pseudischnaspis linearis Hemp., Rev. Mus. Paul., iv, p. 506 (1900).

" " " Ann. Mag. N. H., (7), viii, p. 108 (1901).

Habitat.—Brazil.

On Myrcia.

1322. Pseudischnaspis longissima (Ckll.).

Aspidiotus (Chrysomphalus) longissimus Ckll., Ann. Mag. N. H., (7), i, p. 439 (1893).

Pseudischnaspis longissima Ckll., Am. Nat., xxxv, p. 64 (1901).

Habitat.—Mexico.

On Mango.

Genus **PSEUDODIASPIS** Ckll. Type, larreae.

s. g. Pseudodiaspis Ckll., Bull. 6, T. s., Div. Ent. Dep. Ag., p. 21 (1897); g.

Check List, Suppl., p. 398 (1899).

1323. Pseudodiaspis dentilobis (Ckll.).

Aspidiotus (Pseudodiaspis) dentilobis Ckll., Ann. Mag. N. H., (7), i, p. 438 (1898).

Habitat.—Mexico.

On Mimosa; Acacia?

1324. Pseudodiaspis larreae (Ckll.).

A. (Pseudodiaspis) larreae Ckll., Bull. 6, T. s., Dep. Ag., p. 21 (1897).

Habitat.—Arizona.

On Larrea tridentata.

Genus **TARGIONIA** Sign. Type, nigra.

Targionia Sign., Ann. Soc. Ent. Fr., (4), x, p. 105 (1870); Leon., Riv. Pat.

Veg., viii, p. 298 (1900); Gen. e Spec. Diaspiti, Asp., p. 181 (1900).

1325. Targionia acaciae (Morg.).

Aspidiotus acaciae Morg., Ent. Mon. Mag., xxv, p. 353 (1889).

" " Mask., N. Z. Trans., xxv, p. 205 (1892).

" " Ckll., Bull. 6, T. s., Dep. Ag., p. 26 (1897).

Targionia " Leon., Gen. e Spec. Diaspiti, Asp., p. 191 (1900).

Habitat.—New South Wales; Tasmania.

On Eucalyptus; Acacia pycnantha.

Targionia acaciæ propinqua (Mask.).

- Aspidiotus acaciæ var. propinqua Mask., N. Z. Trans., xxv, p. 205 (1892).
 " " " " Ckll., Bull. 6, T. s., Dep. Ag., p. 26 (1897).
 Targionia " " " Leon., Gen. e Spec. Diaspiti, Asp., p. 191 (1900).
 Habitat.—New South Wales.
 On Acacia; Hakea saligna.

1326. Targionia artocarpi (Green).

- Aspidiotus artocarpi Green, Ent. Mon. Mag., xxxii, p. 200 (1896).
 A. (Mycetaspis) " Ckll., Bull. 6, T. s., Dep. Ag., pp. 13, 27 (1897).
 Targionia " Leon., Gen. e Spec. Diaspiti, Asp., p. 198 (1900).
 Habitat.—India.
 On Artocarpus integrifolia.

1327. Targionia bigeloviae (Ckll.).

- A. (Hemiberlesia?) bigeloviae Ckll., Bull. 6, T. s., Dep. Ag., p. 20 (1897).
 Aspidiotus bigeloviae Newell, Contr. Ia. Ag. Coll., No. 3, p. 25 (1899).
 " " Ckll. & Parr., The Industrialist, pp. 278, 292 (1899).
 Targionia " Leon., Gen. e Spec. Diaspiti, Asp., p. 226 (1900).
 Habitat.—California.
 On Bigelovia brachylepis.

1328. Targionia casuarinæ (Mask.).

- Aspidiotus casuarinæ Mask., N. Z. Trans., xxvi, p. 66 (1893).
 " " Ckll., Bull. 6, T. s., Dep. Ag., p. 26 (1897).
 Targionia " Leon., Riv. Pat. Veg., viii, p. 314 (1900).
 " " " Gen. e Spec. Diaspiti, Asp., p. 197 (1900).
 Habitat.—Australia.
 On Casuarina equisetifolia.

1329. Targionia cueroensis (Ckll.).

- Aspidiotus cueroensis Ckll., Can. Ent., xxxi, p. 105 (1899).
 " " Newell, Contr. Ia. Ag. Coll., No. 3, p. 21 (1899).
 Targionia " Ckll. & Parr., The Industrialist, p. 278 (1899).
 " " Leon., Gen. e Spec. Diaspiti, Asp., p. 226 (1900).
 Habitat.—Texas.
 On Celtis.

1330. Targionia dearnessi (Ckll.).

- Aspidiotus dearnessi Ckll., Can. Ent., xxx, p. 226 (1898).
 " " " & Parr., The Industrialist, p. 279 (1899).
 Targionia " Leon., Gen. e Spec. Diaspiti, Asp., p. 266 (1900).
 Habitat.—Bruce Peninsula, shores of Lake Huron: Canada.
 On Arctostaphylos uva-ursi.

1331. *Targionia eucalypti* (Mask.).

Aspidiotus eucalypti Mask., Tr. Roy. Soc. S. Austr., p. 102 (1887-88).

“ “ “ “ N. Z. Trans., xxiv, p. 11 (1891).

“ “ “ “ xxv, p. 206 (1892).

“ “ Ckll., Bull. 6, T. s., Dep. Ag., p. 26 (1897).

Targionia “ Leon., Gen. e Spec. Diaspiti, Asp., p. 193 (1900).

Habitat.—New South Wales.

On *Eucalyptus*; *Casuarina*.

***Targionia eucalypti comata* (Mask.).**

Aspidiotus eucalypti var. *comatus* Mask., N. Z. Trans., xxviii, p. 385 (1896).

“ “ “ “ Ckll., Bull. 6, T. s., Dep. Ag., p. 26 (1897).

Targionia “ “ “ Leon., Gen. e Spec. Diaspiti, Asp., p. 194 (1900).

Habitat.—Australia.

On *Eucalyptus viminalis*.

1332. *Targionia graminea* (Ckll.).

Aspidiotus graminellus Ckll., Ann. Mag. N. H., (7), vii, p. 333 (1901).

Targionia graminea “ in litt. (1902).

Habitat.—New Mexico.

On grass.

1333. *Targionia glomerata* (Green).

Aspidiotus (*Targionia*) *glomeratus* Green, Ind. Mus. Notes, v, p. 93 (1903).

Habitat.—India.

On *Saccharum officinale*, associated with *Aclerda japonica*.

1334. *Targionia gutierreziae* (Ckll. & Parr.).

Aspidiotus (*Targionia*) *gutierreziae* Ckll. & Parr., The Industrialist, pp. 277, 282 (1899).

Targionia gutierreziae Leon., Gen. e Spec. Diaspiti, Asp., p. 226 (1900).

Habitat.—New Mexico.

On *Gutierrezia lucida*.

1335. *Targionia helianthi* (Parr.).

Aspidiotus (*Targionia*) *helianthi* Parr., Can. Ent., xxxi, p. 176 (1899).

Habitat.—Kansas.

On roots of sunflower (*Helianthus*).

1336. *Targionia marlatti* (Parr.).

Aspidiotus (*Targionia*) *marlatti* Parr., Can. Ent., xxxi, p. 282 (1899).

“ “ “ “ Bull. 98, Kan. Exp. Sta., p. 143 (1900).

Habitat.—Kansas.

On *Andropogon furcatus*; *A. scoparius*; *Panicum virgatum*; *Chrysopogon*.

1337. *Targionia moorei* (Green).

- Aspidiotus moorei* Green, Ent. Mon. Mag., xxxii, p. 199 (1896).
 " " Ckll., Bull. 6, T. s., Dep. Ag., p. 28 (1897).
Targionia " Leon., Gen. e Spéc. Diaspiti, Asp., p. 195 (1900).
 Habitat.—India.
 On *Grislea tomentosa*.

1338. *Targionia nigra* Sign.

- Targionia nigra* Sign., Ann. Soc. Ent. Fr., (4), x, p. 106 (1870).
Aspidiotus signoreti Comst., 2nd Rep. Dep. Ent. Corn. Univ., p. 82 (1883).
A. (Targionia) " Ckll., Bull. 6, T. s., Dep. Ag., pp. 14, 19 (1897).
Targionia distincta Leon., Gen. e Spec. Diaspiti, Asp., p. 188 (1900).
 Habitat.—France.
 On *Cineraria maritima*.

1339. *Targionia parkinsoniæ* (Ckll.).

(*The Palo Verde scale*.)

- Nerophilaspis parkinsoniæ* Ckll., Bull. 32, Ariz. Exp. Sta., p. 282 (1899).
 " " " Can. Ent., xxxii, p. 131 (1900).
Targionia " " in litt. (1902).
 Habitat.—Arizona.
 On *Parkinsonia Torreyana*.

1340. *Targionia vitis* (Sign.).

- Aspidiotus vitis* Sign., Bull. Soc. Ent. Fr., (5), vi, p. lii and Ann. p. 601 (1876).
 " " Comst., 2nd Rep. Dep. Ent. Corn. Univ., p. 84 (1883).
 " " Goethe, Jahrb. Nass. Ver. Nat., p. 113 (1884).
 " " Leon., Riv. Pat. Veg., iv, p. 51 (1895).
A. (Diaspidiotus) vitis Ckll., Bull. 6, T. s., Dep. Ag., p. 19 (1897).
Aspidiotus " Berl. e Leon., Cherm. Ital., Fasc. ii, No. 43 (1897).
Targionia " Leon., Gen. e Spec. Diaspiti, Asp., p. 187 (1900).
 Habitat.—France; Algiers.
 On grapes.

1341. *Targionia yuccæ* (Ckll.).

- Aspidiotus yuccæ* Ckll., Psyche, vii, Suppl., i, p. 20 (1896).
 " " " Bull. 4, T. s., Dep. Ag., p. 32 (1896).
A. (Chrysomphalus) yuccæ Ckll., Bull. 6, T. s., Dep. Ag., p. 25 (1897).
Hemiberlesia " Leon., Riv. Pat. Veg., vi, p. 127 (1897).
Aspidiotus " Ckll. & Parr., The Industrialist, p. 279 (1899).
Hemiberlesia " Leon., Gen. e Spec. Diaspiti, Asp., p. 26 (1900).
 Habitat.—Mexico.
 On *Yucca*.

***Targionia yuccæ neomexicana* (Ckll.).**

- Aspidiotus yuccæ* var. *neomexicanus* Ckll., Ann. Mag. N.H., (7), ii, p. 25 (1898).
 " " " " " & Parr., The Industrialist, p. 278 (1899).
 Habitat.—New Mexico.
 On *Yucca elata*.

1342. Targionia yuccarum (Ckll.).

Aspidiotus yuccarum Ckll., Ann. Mag. N. H., (7), ii, p. 25 (1898).

Targionia " " & Parr., The Industrialist, p. 279 (1899).

Hemiberlesia " Leon., Gen. e Spec. Diaspiti, Asp., p. 222 (1900).

Habitat.—New Mexico.

On Yucca elata: at base of stems of Bigelowia wrightii.

Genus **XEROPHILASPIS** Ckll. Type, prosopidis.

s. g. Xerophilaspis Ckll., Bull. 6, T. s., Dep. Ag., p. 14 (1897); g. Check List, Suppl., p. 396 (1899).

1343. Xerophilaspis prosopidis (Ckll.).

Aspidiotus prosopidis Ckll., Psyche, vii, Suppl., i, p. 15 (1895).

A. (Xerophilaspis) " " Bull. 6, T. s., Dep. Ag., pp. 14, 22 (1897).

Xerophilaspis " " Check List, Suppl., p. 396 (1899).

Targionia " Leon., Gen. e Spec. Diaspiti, Asp., p. 190 (1900).

Habitat.—Arizona; Mexico.

On Mesquite.

Genus **ODONASPIS** Leon. Type, secreta.

Odonaspis Leon., Riv. Pat. Veg., v, p. 284 (1897); Ckll., Bull. 6, T. s., Dep. Ag., p. 14 (1897).

Spatheaspis Leon., Riv. Pat. Veg., vi, p. 115 (1897); Gen. e Spec. Diaspiti, Asp., p. 14 (1900).

s. g. Froggattiella Leon., Riv. Pat. Veg., viii, p. 300 (1900); Ckll., Psyche, ix, p. 72 (1902). Type, inusitata.

Anoplaspis Leon., Riv. Pat. Veg., viii, p. 344 (1900); Gen. e Spec. Diaspiti, Asp., p. 227 (1900). Type, bambusarum.

1344. Odonaspis bambusarum (Ckll.).

Aspidiotus (Odonaspis) bambusarum Ckll., Psyche, viii, p. 191 (1898).

Anoplaspis bambusarum Leon., Gen. e Spec. Diaspiti, Asp., p. 228 (1900).

Habitat.—California (from Japan).

On bamboo.

1345. Odonaspis canaliculata Green.

Odonaspis canaliculata Green, Jn. Bomb. N. H. Soc., xiii, p. 72 (1900).

Habitat.—India.

1346. Odonaspis inusitata (Green).

Aspidiotus inusitatus Green, Cocc. Ceylon, pt. i, p. 66 (1896).

" " Ckll., Bull. 6, T. s., Dep. Ag., p. 27 (1897).

Targionia (Froggattiella) inusitata Leon., Gen. e Spec. Diaspiti, Asp., p. 183 (1900).

Habitat.—Ceylon.

On bamboo.

1347. *Odonaspis janeirensis* (Hemp.).

Aspidiotus (*Odonaspis*) *janeirensis* Hemp., Rev. Mus. Paul., iv, p. 500 (1900).

" " " " Ann. Mag. N. H., (7), viii, p. 106
(1901).

Odonaspis janeirensis Ckll., Rev. Chil. Hist. Nat., vi, p. 256 (1902).

Habitat.—Brazil.

On grass.

1348. *Odonaspis secreta* (Ckll.).

Aspidiotus secretus Ckll., Psyche, vii, Suppl., i, p. 20 (1896).

" " " Bull. 4, T. s., Dep. Ag., p. 51 (1896).

" (Odonaspis) *secretus* Ckll., Bull. 6, T. s., Dep. Ag., pp. 14, 20, 31
(1897).

Spatheaspis secretus Leon., Riv. Pat. Veg., vi, p. 115 (1897).

Aspidiotus " var. *lobulatus* Mask., Ent. Mon. Mag., xxxiii, p. 241 (1897).

" " " " " N. Z. Trans., xxx, p. 224 (1898).

Spatheaspis " " " Leon., Gen. e Spec. Diaspiti, Asp., p. 221
(1900).

" " Ckll., Psyche, ix, p. 72 (1900).

Habitat.—Japan; Honolulu.

On bamboo.

***Odonaspis secreta saccharicaulis* (Zehnt.).**

Aspidiotus saccharicaulis Zehnt., Mede. Proef. Suik., Java, n. s., No. 39, p.
1 (1897).

" *secretus* var. *saccharicaulis* Ckll., Pr. Ac. N. Sci. Ph., p. 274 (1899).

Habitat.—Java.

On bamboo.

***Odonaspis secreta greenii* (Ckll.).**

|| *Aspidiotus secretus* Green, Cocc. Ceylon, pt. i, p. 64 (1896).

Odonaspis secreta var. *Greenii* Ckll., Ann. Mag. N. H., (7), ix, p. 25 (1902).

Habitat.—Ceylon.

On *Arundinaria*.

Genus *PSEUDOPARLATORIA* Ckll. Type, *ostreata*.

Pseudoparlatoria Ckll., Journ. Inst. Jam., i, p. 136 (1892); Bull. Bot. Dep.
Jam., n. s., iv, p. 108 (1897).

1349. *Pseudoparlatoria noacki* Ckll.

Pseudoparlatoria noacki Ckll., Psyche, viii, p. 201 (1898).

" " " Rev. Mus. Paul., iii, p. 42 (1898).

" " Hemp., " " " iv, p. 511 (1900).

Habitat.—Brazil.

On *Nectandra*.

1350. Pseudoparlatoria ostreata Ckll.

Pseudoparlatoria ostreata Ckll., Journ. Inst. Jam., i, p. 136 (1892).

" " " Bull. Bot. Dep. Jam., n. s., iv, p. 108 (1897).

Habitat.—Jamaica.

On *Acalypha*.

1351. Pseudoparlatoria parlatorioides (Comst.).

Aspidiotus(?) *parlatorioides* Comst., 2nd Rep. Dep. Ent. Corn. Univ., p. 64 (1883).

Pseudoparlatoria " Ckll., Rev. Mus. Paul., iii, p. 503 (1898).

" " Rolfs & Quaint., Cocc. Amer., Dec. i-ii, No. 9 (1898).

" " Ckll., Jn. N. Y. Ent. Soc., vii, p. 258 (1899).

" " Hemp., Rev. Mus. Paul., iv, p. 511 (1900).

Habitat.—Florida; Brazil; Mexico.

On *Persea carolinensis*; *Drimys*; *Psidium*; peach; *Oncidium varicosum*; *Magnolia grandiflora*, etc.

1352. Pseudoparlatoria serrulata Towns. & Ckll.

Pseudoparlatoria serrulata Towns. & Ckll., Jn. N. Y. Ent. Soc., vi, p. 180 (1898).

Habitat.—Mexico.

On *Myrtus tweedii*.

Genus **DIASPIDISTIS** Hemp. Type, *multilobis*.

Diaspidistis Hemp., Rev. Mus. Paul., iv, p. 522 (1900); Ann. Mag. N. H., (7), viii, p. 110 (1901).

1353. Diaspidistis multilobis Hemp.

Diaspidistis multilobis Hemp., Rev. Mus. Paul., iv, p. 522 (1900).

" " " Ann. Mag. N. H., (7), viii, p. 110 (1901).

Habitat.—Brazil.

On *Myrtaceæ*.

Genus **AONIDIA** Targ. Type, *purpurea=lauri*.

Aonidia Targ., Catalogue, p. 42 (1869); Sign., Ann. Soc. Ent. Fr., (4), x, p. 102 (1870); Comst., 2nd Rep. Dep. Ent. Corn. Univ., p. 128 (1883); Targ., Coccin. deg. Agrumi Ital., p. 14 (1891); Green, Coccidæ Ceylon, pt. i, p. 68 (1896).

1354. Aonidia(?) allaudi (de-Charm.).

Fiorinia allaudi de Charm., Pr. Soc. Amic. Scien., p. 35 (1899).

Aonidia(?) " Ckll., Am. Nat., xxxiii, p. 900 (1899).

Habitat.—Mauritius.

Aonidia allaudi galliformens (de Charm.).

Fiorinia allaudi var. *galliformens* de Charm., Pr. Soc. Amic. Scien., p. 36 (1899).

Aonidia " " " Ckll., Am. Nat., xxxiii, p. 900 (1899).

Habitat.—Mauritius.

1355. *Aonidia banksiæ* Full.

Aonidia banksiæ Full., Notes on Cocc. W. Austr., p. 11 (1897).

" " " Tr. Ent. Soc. Lond., p. 473 (1899).

Habitat.—W. Australia.

On *Banksia attenuata*; *B. menziesii*; *B. prionotes*; *B. ilicifolia*.

1356. *Aonidia crenulata* Green.

Aonidia crenulata Green, Jn. Bomb. N. H. Soc., xiii, p. 74 (1900).

Habitat.—India.

1357. *Aonidia distinctissima* (Newst.).

Parlatoria distinctissima Newst., Ent. Mon. Mag., xxxii, p. 133 (1896).

Aonidia " Ckll., Check List, p. 338 (1896).

Habitat.—Baluchistan.

On *Nerium oleander*.

1358. *Aonidia ebeni* "Green," Leon.

Aonidia ebeni "Green," Leon., Riv. Pat. Veg., viii, p. 329 (1900).

" " " " Gen. e Spec. Diaspiti, Asp., p. 212 (1900).

Habitat.—Ceylon.

On *Diospyros*.

1359. *Aonidia elæagna* Mask.

Aonidia elæagnus Mask., Ent. Mon. Mag., xxxiii, p. 241 (1897).

" " " N. Z. Trans., xxx, p. 227 (1898).

" " Leon., Gen. e Spec. Diaspiti, Asp., p. 210 (1900).

Habitat.—Japan.

On *Elæagnus macrophylla*.

1360. *Aonidia lauri* (Bouché).

Aspidiotus lauri Bouché, Schäd. Gart. Ins., p. 52 (1833).

" " " Naturg. Ins., p. 16 (1834).

" " Burm., Handb. Ent., ii, p. 68 (1835).

" " Blanch., Hist. Nat. Ins., iii, p. 214 (1840).

" " Koll., Inj. Ins., p. 180 (1840).

Aonidia purpurea Targ., Catalogue, p. 42 (1869).

" *lauri* Sign., Ann. Soc. Ent. Fr., (4), x, p. 103 (1870).

" " Comst., 2nd Rep. Dep. Ent. Corn. Univ., p. 129 (1883).

" " Saccardo, Riv. Pat. Veg., iv, p. 52 (1895).

" " Berl. e Leon., Cherm. Ital., Fasc. i, No. 24 (1895).

" " Leon., Riv. Pat. Veg., viii, p. 327 (1900).

" " " Gen. e Spec. Diaspiti, Asp., p. 210 (1900).

Habitat.—Europe.

On *Laurel*.

1361. *Aonidia loranthi* Green.

Aonidia loranthi Green, Cocc. Ceylon, pt. i, p. 74 (1896).

" " Leon., Gen. e Spec. Diaspiti, Asp., p. 218 (1900).

Habitat.—Ceylon.

On *Loranthus*.

1362. Aonidia messuæ "Green," Leon.

Aonidia messuæ "Green," Leon., Gen. e Spec. Diaspiti, Asp., p. 214 (1900).

Habitat.—Ceylon.

On *Mesua ferrea*.

1363. Aonidia obscura Green.

Aonidia obscura Green, Cocc. Ceylon, pt. i, p. 76 (1896).

" " Leon., Gen. e Spec. Diaspiti, Asp., p. 214 (1900).

Habitat.—Ceylon.

On *Loranthus*.

1364. Aonidia planchonioides Green.

Aonidia planchonioides Green, Jn. Bomb. N. H. Soc., xiii, p. 252 (1900).

" " Leon., Gen. e Spec. Diaspiti, Asp., p. 216 (1900).

Habitat.—Ceylon (Botanic Gardens).

On *Ficus*.

1365. Aonidia spatulata Green.

Aonidia spatulata Green, Jn. Bomb. N. H. Soc., xiii, p. 73 (1900).

Habitat.—India.

Genus **GYMNASPIS** Newst. Type, *æchmæ*.

Gymnaspis Newst., Ent. Mon. Mag., xxxiv, p. 92 (1898); Mon. Brit. Cocc., i, p. 130 (1901).

1366. Gymnaspis æchmæ Newst.

Gymnaspis æchmæ Newst., Ent. Mon. Mag., xxxiv, p. 92 (1898).

" " Hemp., Rev. Mus. Paul., iv, p. 508 (1900).

" " Newst., Mon. Brit. Cocc., i, p. 131 (1901).

Habitat.—England (Roy. Bot. Gardens, Kew); Brazil.

On *Æchmea aquilega*.

1367. Gymnaspis bullata (Green).

Aonidia bullata Green, Cocc. Ceylon, pt. i, p. 72 (1896).

Gymnaspis " Ckll., Check List, Suppl., p. 396 (1899).

Habitat.—Ceylon.

1368. Gymnaspis perpusilla (Mask.).

Parlatoria perpusilla Mask., N. Z. Trans., xxix, p. 299 (1897).

" " Full., Tr. Ent. Soc. Lond., p. 468 (1899).

Gymnaspis " Ckll. & Parr., The Industrialist, p. 278 (1899).

Habitat.—W. Australia.

On *Hakea*.

Genus **GREENIELLA** Ckll. Type, *cornigera*.

Greeniella Ckll., Am. Nat., xxxi, p. 703 (1897): Leon., Gen. e Spec. Diaspiti,

Asp., p. 200 (1900).

1369. *Greeniella cornigera* (Green).

Aonidia corniger Green, Ind. Mus. Notes, iv, p. 5 (1896).

" " " Cocc. Ceylon, pt. i, p. 69 (1896).

Greeniella cornigera Ckll., Check List, Suppl., p. 396 (1899).

" " Leon., Gen. e Spec. Diaspiti, Asp., p. 200 (1900).

Habitat.—Ceylon.

On *Psychotria thwaitesii*; *Litsia Zeylanica*.

Genus **LEPIDOSAPHES** Shimer. Type, conchiformis=ulmi.

Lepidosaphes Shimer, Tr. Am. Ent. Soc., i, p. 373, Jan. (1868): Sign., Ann.

Soc. Ent. Fr., (4), x, p. 91 (1870): Loew, Verh. k. k. zool. bot. Ges. Wien, p. 522 (1882): Dougl., Ent. Mon. Mag., xxiii, p. 242 (1887).

Mytilaspis Sign., Ann. Soc. Ent. Fr., (4), viii, p. 841 (1868) no desc.: Targ.,

Catalogue, p. 44 (1869): Sign., Ann. Soc. Ent. Fr., (4), x, p. 91 (1870):

Comst., Rep. U. S. Dep. Ag., 1880, p. 320 (1881); 2nd Rep. Dep. Ent.

Corn. Univ., p. 116 (1883): Mask., Ins. Nox. Agr. N. Z., p. 48 (1887):

Dougl., Ent. Mon. Mag., xxiii, p. 242 (1887): Targ., Coccin. deg. Agrumi

in Ital., p. 22 (1891): Berl., Riv. Pat. Veg., iv, p. 80 (1895): Green, Cocc.

Ceylon, pt. i, p. 77 (1896): Newst., Mon. Brit. Cocc., i, p. 194 (1901).

Phaulomytilus Leon., Riv. Pat. Veg., vi, pp. 205, 206 (1897). Type, striatus.

Cocomytilus " " " " " pp. 205, 206 (1897). " convexus.

Trichomytilus " " " " " pp. 205, 206 (1897). " formosus.

s. g. *Allantomytilus* Leon., Riv. Pat. Veg., vi, pp. 205, 206 (1897). Type, maideni.

1370. *Lepidosaphes abietis* (Sign.).

Mytilaspis abietis Sign. (non. Schir.), Ann. Soc. Ent. Fr., (4), x, p. 92 (1870).

" " " Bull. Soc. Ent. Fr., (6), ii, p. clxxxiv (1882).

" confusus Horvath, Rev. Ent. Fr., p. 95 (1897).

" abietis Ckll., Pr. Ac. N. Sci. Ph., p. 274 (1899).

Habitat.—Europe.

On Abies.

1371. *Lepidosaphes acaciæ* (Mask.).

Mytilaspis acaciæ Mask., N. Z. Trans., xxviii, p. 387 (1896).

Habitat.—Australia.

On *Acacia linifolia*.

***Lepidosaphes acaciæ albida* (Mask.).**

Mytilaspis acaciæ var. *albida* Mask., N. Z. Trans., xxix, p. 304 (1897).

Habitat.—W. Australia.

On *Acacia*.

1372. *Lepidosaphes alba* (Ckll.).

Mytilaspis albus Ckll., Ent. Mon. Mag., xxix, p. 156 (1893).

" " " Science, xxii, p. 151 (1893).

" " " Bull. Bot. Dep. Jam., p. 109 (1897).

" " Rolfs & Quaint., Cocc. Amer., Dec. i-ii, No. 12 (1898).

Habitat.—Jamaica; Mexico; Florida, from Bahama Islands; New Mexico.
On *Solanum* and two unknown plants.

1373. *Lepidosaphes ampelodesmæ* (Newst.).

Mytilaspis ampelodesmæ Newst., Tr. Ent. Soc. Lond., p. 95 (1897).

Habitat.—Algeria.

On *Ampelodesma tenax*.

1374. *Lepidosaphes argentata* (Ckll.).

Mytilaspis argentatus Ckll., Rev. Mus. Paul., iii, p. 43 (1898).

“ “ Hemp., “ “ “ iv, p. 514 (1900).

Habitat.—Brazil; Mexico.

1375. *Lepidosaphes bambusicola* (Ckll.).

Mytilaspis bambusicola Ckll., Can. Ent., xxxi, p. 44 (1899).

“ “ Hemp., Rev. Mus. Paul., iv, p. 515 (1900).

Habitat.—Brazil.

On bamboo.

1376. *Lepidosaphes banksiæ* (Mask.).

Mytilaspis banksiæ Mask., N. Z. Trans., xxviii, p. 388 (1896).

Habitat.—Australia.

On *Banksia integrifolia*.

1377. *Lepidosaphes beckii* (Newm.).

(*Purple scale*.)

Coccus beckii Newm., The Entom., iv, p. 217, Feb. (1869).

Aspidiotus citricola Pack., Guide to Study of Insects, p. 527, Aug. (1869).

Coccus anguinus Bdv., Insectologie Agricole, iv (1870).

Mytilaspis fulva Targ., Bull. Soc. Ent. Ital., p. 131 (1872).

“ *flavescens* Targ., Annali R. Minist. Agr., p. 84 (1876).

“ “ Sign., Ann. Soc. Ent. Fr., (5), vi, p. 604 (1876).

Aspidiotus citricola Glover, Rep. U. S. Dep. Ag., 1876, p. 43 (1877).

Mytilaspis “ Comst., “ “ “ “ 1880, p. 321 (1881).

“ *flavescens* Targ., Annali di Agr., p. 159 (1881).

“ *citricola* Osborn, Tr. Ia. Hor. Soc., p. 214 (1882).

“ “ Saund., Ins. Inj. to Fruits, p. 390 (1883).

“ “ Comst., 2nd Rep. Dep. Ent. Corn. Univ., p. 117 (1883).

“ *flavescens* “ “ “ “ “ p. 123 (1883).

“ “ Targ., Annali di Agr., p. 392 (1884).

“ *citricola* Voyle, Bull. 4, Div. Ent. Dep. Ag., p. 71 (1884).

“ “ Hubbard, Ins. Aff. Orange, p. 26 (1885).

“ *flavescens* Dougl., Ent. Mon. Mag., xxii, p. 249 (1886).

“ *citricola* Mask., N. Z. Trans., xxii, p. 135 (1889).

“ “ Craw, Rep. Cal. Bd. Hort., p. 8 (1891).

“ *fulva* Targ., Cocc. deg. Agr. Ital., p. 23 (1891).

“ “ Berl., Riv. Pat. Veg., i. pp. 64, 67 (1892).

“ “ “ “ “ ii, p. 38 (1893).

Mytilaspis

- Aspidiotus citricola* Ckll., Ent. Mon. Mag., xxix, p. 155 (1893).
 “ “ Morg., Bull. 28, La. Exp. Sta., p. 992 (1893).
 “ “ French, Handb. Destr. Ins. Victoria, p. 85 (1893).
 “ “ Mask., N. Z. Trans., xxvii, p. 48 (1894).
 “ “ Craw, Bull. 68, Cal. Bd. Hort., p. 17 (1894).
 “ “ “ 4th Bien. Rep. Cal. Bd. Hort., p. 95 (1894).
 “ *fulva* Saccardo, Riv. Pat. Veg., iv, p. 54 (1895).
 “ “ Berl., “ “ “ “ pp. 84, 152 (1895).
 “ “ Berl. e Leon., Cherm. Ital., Fasc. i, No. 20 (1895).
 “ “ “ Riv. Pat. Veg., iv, pp. 196, 201, 258 (1896).
 “ *citricola* Lounsb., Rep. Ent. Cape Good Hope, p. 67 (1896).
 “ “ Davis, Spec. Bull. Mich. Exp. Sta., p. 38 (1896).
 “ “ Green, Cocc. Ceylon, pt. i, p. 78 (1896).
 “ “ Ckll., Bull. Bot. Dep. Jam., p. 108 (1897).
 “ “ Starnes, Bull. 36, Ga. Exp. Sta., p. 27 (1897).
 “ “ var. *tasmaniae* Mask., N. Z. Trans., xxix, p. 303 (1897).
 “ “ Rolfs & Quaint., Cocc. Amer., Dec. i-ii, No. 10 (1898).
 “ “ de Charm., Pr. Soc. Amic. Scienc., p. 34 (1899).
 “ *beckii* Ckll., Pr. Ac. N. Sci. Ph., p. 275 (1899).
 “ *tasmaniae* Ckll., Victorian Naturalist, xvi, p. 14 (1899).
 “ *citricola* Frank & Kruger, Schildlausbuch, p. 99 (1900).
 “ “ Gossard, Bull. 51, Fla. Exp. Sta., p. 108 (1900).
 “ “ Marlatt, Yearbook U. S. Dep. Ag., 1900, p. 266 (1901).
 “ “ Lefroy, Scale Ins. Less. Antil., p. 60 (1901).
 “ “ Kuw., Pr. Cal. Ac. Sci., (3), iii, p. 81 (1902).
 “ *beckii* Ckll., Ent. News, xiii, p. 17 (1902).

Habitat.—Europe; Madeira; W. Africa; S. Africa; Mauritius; Ceylon; Japan; Australia; Tasmania; New Zealand; Fiji; Hawaiian Islands; Bermuda; West Indies; Florida; Louisiana; Colorado; California.

On orange; lemon; citron; fig; Croton; grape-fruit; oak; *Elæagnus*; *Banksia integrifolia*; *Taxus cuspidata*; *Cercidiphyllum japonicum*; *Pomaderris apetala*.

1378. *Lepidosaphes carinata* (Ckll.).

- Mytilaspis carinatus* Ckll., Psyche, vii, Suppl., i, p. 21 (1896).
 “ “ “ Bull. 4, T. s., Dep. Ag., p. 45 (1896).
 “ “ Craw, 5th Bien. Rep. Cal. Bd. Hort., p. 40 (1896).

Habitat.—Central America; Mexico.

1379. *Lepidosaphes casuarinae* (Mask.).

- Mytilaspis casuarinae* Mask., N. Z. Trans., xxv, p. 209 (1892).
 “ “ “ “ “ “ xxvii, p. 45 (1894).

Habitat.—Australia.

On Casuarina.

1380. *Lepidosaphes ceratoniae* (Genn.).

Mytilaspis ceratoniae Genn., Bull. Soc. Ent. Fr., (7), v, p. cclxxvii (1895).

Habitat.—Isle of Cyprus.

On *Ceratonia siliqua*.

1381. *Lepidosaphes cocculi* (Green).

Mytilaspis cocculi Green, Coccidæ Ceylon, pt. i, p. 81 (1896).

Habitat.—Ceylon.

On *Cocculus macrocarpus*.

1382. *Lepidosaphes concolor* (Ckll.).

Mytilaspis albus var. *concolor* Ckll., Psyche, vi, p. 572 (1893).

“ “ “ “ “ Can. Ent., xxvi, p. 190 (1894).

“ “ “ “ “ Bull. Bot. Dep. Jam., p. 109 (1897).

Habitat.—New Mexico; Colorado.

On *Chenopodium*; *Atriplex canescens*.

***Lepidosaphes concolor viridissima* (Ckll. & Parr.).**

Mytilaspis concolor var. *viridissima* Ckll. & Parr., The Industrialist, p. 276 (1899).

Habitat.—New Mexico.

On *Atriplex canescens*.

1383. *Lepidosaphes convexa* (Mask.).

Mytilaspis convexa Mask., N. Z. Trans., xxvi, p. 70 (1893).

Habitat.—Australia.

On *Acacia*.

1384. *Lepidosaphes cordylinidis* (Mask.).

Mytilaspis cordylinidis Mask., N. Z. Trans., xi, p. 195 (1878).

“ “ Comst., 2nd Rep. Dep. Ent. Corn. Univ., p. 122 (1883).

“ “ Mask., Ins. Nox. Agr. N. Z., p. 48 (1887).

Habitat.—New Zealand.

On *Cordyline australis*; *C. indivisa*; *Phormium*; *Gahnia*; *Astelia*; *Eucalyptus*; ferns.

1385. *Lepidosaphes crawii* (Ckll.).

Mytilaspis crawii Ckll., Psyche, vii, Suppl., i, p. 21 (1896).

“ “ “ Bull. 4, T. s., Dep. Ag., p. 44 (1896).

“ “ Craw, 5th Bien. Rep. Cal. Bd. Hort., p. 41 (1896).

“ “ Kuw., Pr. Cal. Ac. Sci., (3), iii, p. 82 (1902).

Habitat.—Japan; California.

On *Elæagnus*; *Quercus*.

***Lepidosaphes crawii canaliculata* (Mask.).**

Mytilaspis crawii var. *canaliculata* Mask., N. Z. Trans., xxix, p. 304 (1897).

“ “ “ “ “ Ent. Mon. Mag., xxxiii, p. 241 (1897).

Habitat.—Japan.

On *Quercus cuspidata*.

1386. *Lepidosaphes crotonis* (Ckll.).

Mytilaspis crotonis Ckll., Ent. Mon. Mag., xxix, p. 156 (1893).

" " " Bull. Bot. Dep. Jam., p. 109 (1897).

Habitat.—Jamaica.

On *Croton*.

1387. *Lepidosaphes defecta* (Mask.).

Mytilaspis defecta Mask., N. Z. Trans., xxix, p. 304 (1897).

Habitat.—W. Australia.

***Lepidosaphes defecta tincta* (Mask.).**

Mytilaspis defecta var. *tincta* Mask., N. Z. Trans., xxix, p. 304 (1897).

Habitat.—W. Australia.

On *Hakea*.

1388. *Lepidosaphes drimydis* (Mask.).

Mytilaspis drimydis Mask., N. Z. Trans., xi, p. 196 (1878).

" " Comst., 2nd Rep. Dep. Ent. Corn. Univ., p. 123 (1883).

" " Mask., Ins. Nox. Agr. N. Z., p. 49 (1887).

Habitat.—New Zealand.

On *Drimys colorata*.

1389. *Lepidosaphes epiphytidis* (Mask.).

Mytilaspis epiphytidis Mask., N. Z. Trans., xvii, p. 21 (1884).

" " " Ins. Nox. Ag. N. Z., p. 49 (1887).

Habitat.—New Zealand.

On *Astelia cunninghamii*.

1390. *Lepidosaphes euryæ* (Kuwana).

Mytilaspis euryæ Kuw., Pr. Cal. Ac. Sci., (3), iii, p. 80 (1902).

Habitat.—Japan.

On *Eurya ochracea*.

1391. *Lepidosaphes ficus* (Sign.).

Mytilaspis ficus Sign., Ann. Soc. Ent. Fr., (4), x, p. 94 (1870).

" " Colvée, Estud. sob. alg. Ins., Cocc., p. 30 (1881).

" " Comst., 2nd Rep. Dep. Ent. Corn. Univ., p. 123 (1883).

" " Morg., Ent. Mon. Mag., xxvi, p. 230 (1890).

" " Berl. e Leon., Cherm. Ital., Fasc. i, No. 22 (1895).

" " Newst., Mon. Brit. Cocc., i, p. 202 (1901).

Habitat.—Europe.

On fig.

1392. *Lepidosaphes flava* (Targ.).

Mytilaspis flava Targ., Catalogue, p. 44 (1869).

" " Sign., Ann. Soc. Ent. Fr., (4), x, p. 96 (1870).

" " Comst., 2nd Rep. Dep. Ent. Corn. Univ., p. 123 (1883).

Lepidosaphes Kirkaldy, Fauna Haw., iii, pt. 2, p. 111 (1902).

Habitat.—Europe; Australia; New Zealand; N. America.

On olive.

Lepidosaphes flava hawaiiensis (Mask.).

Mytilaspis flava var. *hawaiiensis* Mask., N. Z. Trans., xxvii, p. 47 (1894).

“ “ “ “ “ “ xxx, p. 230 (1898).

Habitat.—Hawaiian Islands; China.

On *Pyrus sinensis*.

Kirkaldy thinks that *flava* and *var. hawaiiensis* are the same and probably a variety of *L. ulmi*.

1393. *Lepidosaphes formosa* (Mask.).

Mytilaspis formosa Mask., N. Z. Trans., xxvi, p. 68 (1893).

Habitat.—Australia.

On *Eucalyptus corynocalyx*; *E. orbifolia*.

1394. *Lepidosaphes fulleri* (Ckll.) new name.

|| *Mytilaspis elongata* Full., Tr. Ent. Soc. Lond., p. 469 (1899).

“fulleri Ckll., in litt. (1902).

Habitat.—W. Australia.

On *Banksia ilicifolia*.

1395. *Lepidosaphes gloverii* (Pack.).

(Glover's scale.)

Coccus gloverii Pack., Guide to Study of Ins., Ed. i, p. 527 (1869).

Aspidiotus " " 7th Rep. Mass. Bd. Agr., 1869, p. 259 (1870).

“ “ “ Guide to Study of Ins., Ed. ii, p. 527 (1872).

" (Coccus) *gloverii* Glover, Rep. U. S. Dep. Ag., 1876, p. 41 (1877).

Mytilaspis gloverii Comst., " " " " 1880, p. 323 (1881).

“ “ “ 2nd Rep. Dep. Ent. Corn. Univ., p. 117 (1883).

“ gloveri Saund., Ins. Inj. to Fruits, p. 392 (1883).

“ Targ., *Annali di Agr.*, p. 395 (1884).

“ Hubbard, *Ins. Aff.* Orange, p. 19 (1885).

“ “ Comst., Intr. Ent., p. 146 (1888).

Mask., N. Z. Trans., xxiii, p. 8 (1890).

“ Morg., Spec. Bull. La. Exp. Sta., p. 58 (1893).

" " Craw, Bull. 68, Cal. Bd. Hort., p. 16 (1894).

“ “ “ 4th Bien. Rep. Cal. Bd. Hort., p. 95 (1894).

“ “ “ 5th “ “ “ “ “ p. 41 (1896)

“ “ Lounsb., Rep. Ent. Cape Good Hope, p. 71 (1896).

Starnes, Bull. 36, Ga. Exp. Sta., p. 27 (1897).

“ “ Berl. e Leon., *Annali di Agr.*, p. 130 (1898).

“ de Charm., Pr. Soc. Amic. Scien., p. 35 (1899).

Gossard, Bull. 51, Fla. Exp. Sta. p. 112 (1900).

“ “ Marlatt, Yearbook U. S. Dep. Ag., p. 265 (1900).

“ “ Kuw., Pr. Cal. Ac. Sci., (3), iii, p. 81 (1902).

Lepidosaphes" Kirkaldy, Fauna Haw., iii, pt. 2, p. 111 (1902).

Habitat.—Middle and Southern United States; Cal.; Australia; Ceylon; India; China; Japan; Hawaiian Islands; Mauritius; S. Africa; S. America; Mexico.

On orange; lime; palms; *Magnolia fuscata*.

1396. *Lepidosaphes grandilobis* (Mask.).

Mytilaspis grandilobis Mask., N. Z. Trans., xxvi, p. 70 (1893).

Habitat.—Australia.

On Banksia.

1397. *Lepidosaphes greeni* (de Charm.).

Mytilaspis greeni de Charm., Pr. Soc. Amic. Scien., p. 33 (1899).

Habitat.—Mauritius.

1398. *Lepidosaphes grisea* (Mask.).

Mytilaspis grisea Mask., N. Z. Trans., xxii, p. 133 (1889).

Habitat.—Australia.

On Eucalyptus; Acacia.

1399. *Lepidosaphes hibisci* (de Charm.).

Mytilaspis hibisci de Charm., Pr. Soc. Amic. Scien., p. 32 (1899).

Habitat.—Mauritius.

1400. *Lepidosaphes indentata* (Green).

Mytilaspis indentata Green, Ann. Mag. N. H., (7), vi, p. 448 (1900).

Habitat.—Australia.

1401. *Lepidosaphes intermedia* (Mask.).

Mytilaspis intermedia Mask., N. Z. Trans., xxiii, p. 7 (1890).

Habitat.—New Zealand.

On *Leptospermum scoparium*.

1402. *Lepidosaphes juglandis* (Sign.).

Mytilaspis juglandis Sign. (non Fitch), Ann. Soc. Ent. Fr., (4), x, p. 95 (1870).

“ “ Comst., 2nd Rep. Dep. Ent. Corn. Univ., p. 124 (1883).

“ “ Morg., Ent. Mon. Mag., xxvi, p. 227 (1890).

“ “ Frank & Kruger, Schildlausbuch, p. 99 (1900).

Habitat.—France; Germany.

On butternut (*Juglans cinerea*).

1403. *Lepidosaphes lactea* (Mask.).

Mytilaspis lactea Mask., N. Z. Trans., xxvii, p. 48 (1894).

Habitat.—New Zealand.

On *Fuchsia excorticata*.

1404. *Lepidosaphes lasianthi* (Green).

Mytilaspis lasianthi Green, Jn. Bomb. N. H. Soc., xiii, p. 253 (1900).

Habitat.—Ceylon.

On *Lasianthus strigosus*; *Croton*.

1405. *Lepidosaphes leptospermi* (Mask.).

Mytilaspis leptospermi Mask., N. Z. Trans., xiv, p. 215 (1881).

“ “ “ Ins. Nox. Agr. N. Z., p. 50 (1887).

Habitat.—New Zealand.

On *Leptospermum scoparium*.

1406. *Lepidosaphes lidgetti* (Ckll.).

Mytilaspis lidgetti Ckll., Victorian Naturalist, xvi, p. 14 (1899).

Habitat.—Australia.

On *Eucalyptus rostrata*; *E. goniocalyx*.

1407. *Lepidosaphes machili* (Mask.).

Mytilaspis machili Mask., N. Z. Trans., xxx, p. 230 (1898).

Habitat.—Japan.

On *Machilus thunbergii*.

1408. *Lepidosaphes maideni* (Mask.).

Mytilaspis maideni Mask., N. Z. Trans., xxix, p. 302 (1897).

Habitat.—Australia.

On *Litsea dealbata*.

1409. *Lepidosaphes melaleucæ* (Mask.).

Mytilaspis melaleucæ Mask., N. Z. Trans., xxviii, p. 389 (1896).

Habitat.—Australia.

On *Melaleuca*.

1410. *Lepidosaphes metrosideri* (Mask.).

Mytilaspis metrosideri Mask., N. Z. Trans., xii, p. 293 (1879).

“ “ Comst., 2nd Rep. Dep. Ent. Corn. Univ., p. 124 (1883).

“ “ Mask., Ins. Nox. Agr. N. Z., p. 50 (1887).

Habitat.—New Zealand.

On *Metrosideros robusta*.

1411. *Lepidosaphes mexicana* (Ckll.).

Mytilaspis mexicana Ckll., Ann. Mag. N. H., (7), i, p. 438 (1898).

Habitat.—Mexico.

On “Nettle-tree”; “Dragon’s-blood”; roots of *Ficus*.

1412. *Lepidosaphes mimosarum* (Ckll.).

Mytilaspis mimosarum Ckll., The Entom., xxxvi, p. 45 (1903).

Habitat.—Mexico.

On *Mimosa*.

1413. *Lepidosaphes minima* (Newst.).

Mytilaspis minima Newst., Tr. Ent. Soc. Lond., p. 95 (1897).

Habitat.—Algeria.

On *Ficus carica*.

1414. *Lepidosaphes myrthi* (Bouché).

Aspidiotus myrthi Bouché, Stett. Ent. Zeit., xii, p. 112 (1851).

Mytilaspis “ Ckll., The Entom., xxxiv, p. 93 (1901).

Habitat.—Southern Europe.

On *Myrtus communis*.

1415. *Lepidosaphes newsteadi* (Sulc).

Mytilaspis newsteadi Sulc, Sitzb. K. Bohm. Ges. Wiss., No. xlix, pp. 8, 19 (1895).

Habitat.—Europe.

On *Thea japonica*.

***Lepidosaphes newsteadi tokionis* (Kuw.).**

Mytilaspis newsteadi tokionis Kuw., Pr. Cal. Ac. Sci., (3), iii, p. 81 (1902).

Habitat.—Japan.

On *Codiaeum*.

1416. *Lepidosaphes nigra* (Ckll.).

Mytilaspis nigra Ckll., Biol. Centr. Amer., ii, pt. 2, p. 32 (1899).

Habitat.—Mexico.

On “Laurel-tree”; *Yucca*; *Agave*.

1417. *Lepidosaphes nivea* (Mask.).

Mytilaspis nivea Mask., N. Z. Trans., xxvii, p. 46 (1894).

Habitat.—Australia.

On *Melaleuca nodosa*.

1418. *Lepidosaphes pallens* (Mask.).

Mytilaspis pallens Mask., N. Z. Trans., xxii, p. 134 (1889).

Habitat.—N. S. Wales.

On *Xanthorrhoea*.

***Lepidosaphes pallens alba* (Mask.).**

Mytilaspis pallens var. *alba* Mask., N. Z. Trans., xxviii, p. 388 (1896).

Habitat.—Australia.

On *Xanthorrhoea*.

1419. *Lepidosaphes pallida* (Green).

Mytilaspis pallida Green, Ind. Mus. Notes, iv, p. 5 (1896).

“ *gloverii* var. *pallida* Green, Cocc. Ceylon, pt. i, p. 85 (1896).

“ *pallida* Green, Jn. Bomb. N. H. Soc., xiii, p. 254 (1900).

Lepidosaphes “ Kirkaldy, Fauna Haw., iii, pt. 2, p. 111 (1902).

Habitat.—Ceylon; Hawaiian Islands, from Japan.

On willow; *Podocarpus*.

***Lepidosaphes pallida maskelli* (Ckll.).**

Mytilaspis pallida var.? Mask., N. Z. Trans., xxvii, p. 46 (1894).

“ “ var. *maskelli* Ckll., Am. Nat., xxxi, p. 704 (1897).

Habitat.—Hawaiian Islands, from Japan.

On *Podocarpus*.

1420. *Lepidosaphes perlonga* (Ckll.).

Mytilaspis perlonga Ckll., Psyche, viii, p. 202 (1898).

“ “ “ Rev. Mus. Paul., iii, p. 42 (1898).

“ “ Hemp., “ “ “ iv, p. 514 (1900).

Habitat.—Brazil.

On *Baccharis dracunculifolia*.

1421. *Lepidosaphes philococcus* (Ckll.).

Mytilaspis philococcus Ckll., Bull. Soc. Ent. Fr., xviii, p. 252 (1893).

" " " Biol. Centr. Amer., ii, pt. 2, p. 32 (1899).

Habitat.—Mexico.

On *Yucca*; *Agave*.

1422. *Lepidosaphes phymatodidis* (Mask.).

Mytilaspis phymatodidis Mask., N. Z. Trans., xii, p. 292 (1879).

" " Comst., 2nd Rep. Dep. Ent. Corn. Univ., p. 125 (1883).

" " Mask., Ins. Nox. Agr. N. Z., p. 51 (1887).

Habitat.—New Zealand.

On *Phymatodes billardieri*.

1423. *Lepidosaphes pinnæformis* (Bouché).

Aspidiotus pinnæformis Bouché, Stett. Ent. Zeit., xii, p. 111 (1851).

Mytilaspis " Sign., Ann. Soc. Ent. Fr., (4), x, p. 97 (1870).

" " Comst., 2nd Rep. Dep. Ent. Corn. Univ., p. 125 (1883).

" " Dougl., Ent. Mon. Mag., xxiv, p. 21 (1887).

" " Morg., " " " xxvi, p. 229 (1890).

" " Mask., " " " xxviii, p. 70 (1892).

" " Ckll., Gard. Chron., (3), xiii, p. 548 (1893).

" " Newst., Mon. Brit. Cocc., i, p. 204 (1901).

Lepidosaphes " Kirkaldy, Fauna Haw., iii, pt. 2, p. 110 (1902).

Habitat.—England, (Kew Gardens); Australia; N. Zealand; Demerara;
Hawaiian Islands; North America.

On *Cymbidium pendulum*; *Croton*.

1424. *Lepidosaphes pyriformis* (Mask.).

Mytilaspis pyriformis Mask., N. Z. Trans., xi, p. 194 (1878).

" " " " " xiv, p. 215 (1881).

" " " " " xvi, p. 121 (1883).

" " Comst., 2nd Rep. Dep. Ent. Corn. Univ., p. 125 (1883).

" " Mask., N. Z. Trans., xvii, p. 22 (1884).

" " " Ins. Nox. Agr. N. Z., p. 53 (1887).

Habitat.—New Zealand.

On *Dysoxylum spectabile*; *Atherosperma*; *Coprosma*; *Rhipogonum*;
Pinus.

1425. *Lepidosaphes*(?) *riccæ* (Targ.).

Leucaspis riccæ Targ., Annali di Agr., No. 34, p. 160 (1881).

Chionaspis " " " " " p. 397 (1884).

" " " Boll. Soc. Tosc. di Orlicoltura, xiii, pp. 5, 12, 14 (1888).

Mytilaspis(?) " Ckll., in litt. (1902).

Habitat.—France; Greece.

On olive.

1426. *Lepidosaphes ritsema-bosi* (Leon.).

Mytilaspis ritsema-bosi Leon., Boll. Ent. Agr., viii, p. 120 (1901).

Habitat.—Europe.

1427. *Lepidosaphes spinifera* (Mask.).

Mytilaspis spinifera Mask., N. Z. Trans., xxvi, p. 69 (1893).

Habitat.—Australia.

On *Acacia pendula*.

***Lepidosaphes spinifera major* (Mask.).**

Mytilaspis spinifera, forma major Mask., N. Z. Trans., xxx, p. 230 (1898).

“ “ var. *major* Ckll., Check List, Suppl., p. 397 (1899).

Habitat.—Australia.

On *Acacia pendula*.

1428. *Lepidosaphes spinosa* (Full.).

Mytilaspis spinosa Full., Tr. Ent. Soc. Lond., p. 469 (1899).

Habitat.—W. Australia.

On *Melaleuca*.

1429. *Lepidosaphes striata* (Mask.).

Mytilaspis striata Mask., N. Z. Trans., xxvii, p. 47 (1894).

Habitat.—Australia.

On *Casuarina*.

1430. *Lepidosaphes townsendiana* (Ckll.).

Mytilaspis townsendiana Ckll., The Entom., xxxvi, p. 46 (1903).

Habitat.—Mexico.

On “garabatillo.”

1431. *Lepidosaphes ulmi* (Linn.).

(*Oyster-shell scale*.)

— — Reaum., Ins., iv, p. 69, pl. v, figs. 5, 6, 7 (1738).

Coccus ulmi Linn., Syst. Nat., Ed. x, i, p. 455 (1758).

Chermes arborum linearis Geoff., Abr. Ins., i, p. 509 (1762).

Coccus linearis Mod., Act. Goth., i, p. 22 (1778).

“ *arborum* Schr., Enum. Ins. Austr., pp. 295, 585 (1781).

Chermes linearis Fourc., Ent. Paris., p. 229 (1785).

Coccus conchiformis Gmel., Syst. Nat., Ed. xiii, p. 222 (1789).

Chermes linearis Oliv., Ency. Meth., vii, p. 441 (1792).

Coccus conchiformis Bechst., Forstins., i, p. 289 (1804).

Diaspis linearis Costa, Faun. Reg. Nap., Cocc., p. 21 (1835).

Aspidiotus conchiformis Curt., Gard. Chron., p. 375 (1843).

Mytilaspis falciformis Baer., D' Alton, Zeit. für Zool., p. 168 (1849).

Aspidiotus pomorum Bouché, Stett. Ent. Zeit., xii, p. 110 (1851).

“ *pyrus-malus* Kenn., Cleveland Ac. Sci. (1854).

- Coccus conchiformis* Fitch, 1st Rep. Ins. N. Y., p. 740 (1854).
Aspidiotus " " 3rd " " " p. 331 (1856).
 " *juglandis* " " " " " p. 338 (1856).
 " *conchiformis* True, Rep. Me. Bd. Agr., p. 173 (1858).
 " " Brackett, Rep. Me. Bd. Agr., p. 165 (1860).
 " " Judd, Amer. Agriculturalist, p. 178 (1863).
Chermes " Bdv., Ent. Hort., p. 315 (1867).
Diaspis " Targ., Studii sul. Cocc., p. 14 (1867).
Lepidosaphes " Shimer, Tr. Am. Ent. Soc., i, p. 373 (1868).
Aspidiotus conchiformis Cook, Rep. Mich. Bd. Agr., p. 168 (1868).
 " " Riley, 1st Rep. Ins. Mo., p. 7 (1869).
 " " " Am. Ent., ii, p. 110 (1870).
Mytilaspis " Sign., Ann. Soc. Ent. Fr., (4), x, p. 93 (1870).
 " *pomorum* " " " " " p. 98 (1870).
 " *linearis* " " " " " " p. 96 (1870).
Aspidiotus conchiformis LeB., 1st Rep. Ins. Ill., p. 24 (1871).
 " " " 2nd " " " p. 159 (1872).
 " " Pack., Guide to Study of Ins., p. 528 (1872).
Mytilaspis " Riley, 5th Rep. Ins. Mo., p. 93 (1873).
 " *linearis* " " " " " p. 93 (1873).
 " *pomorum* " " " " " pp. 26, 93 (1873).
 " *pomicorticis* " " " " " pp. 73, 95 (1873).
 " *ulmicorticis* " Rep. Ia. Ag. Soc., p. 246 (1874).
 " *conchiformis* Cook, 13th Rep. Mich. Bd. Agr., p. 126 (1874).
Aspidiotus " " Coun. Gent., xl, p. 455 (1875).
 " " Tucker, " " xli, p. 181 (1876).
Mytilaspis pomicorticis Sign., Ann. Soc. Ent. Fr., (5), vi, p. 605 (1876).
Aspidiotus conchiformis Fern. C. H., Rep. Me. Bd. Ag., xxii, p. 61 (1877).
 " " Glover, Rep. U. S. Dep. Ag., 1876, p. 43 (1877).
Mytilaspis pomorum Putn., Tr. Ia. Hor. Soc., p. 247 (1877).
 " " Mask, N. Z. Trans., xi, p. 192 (1878).
Aspidiotus conchiformis Lint., Coun. Gent., xliii, p. 423 (1878).
 " " Periam, Am. Ency. Agr., p. 699 (1881).
Mytilaspis pomicorticis " " " " p. 699 (1881).
 " " Riley, Index to Reports Ins. Missouri, p. 85 (1881).
 " *pomorum* Comst., Rep. U. S. Dep. Ag., 1880, p. 325 (1881).
 " " Osborn, Tr. Ia. Hor. Soc., p. 212 (1882).
 " *pomicorticis* Lint., 1st Rep. Ins. N. Y., p. 61, note (1882).
 ? " *fraxini* Altum, Forstzoologie, iii, pt. 2, p. 364 (1882).
Coccus arborum linearis Sign., Bull. Soc. Ent. Fr., (6), ii, p. clxxxiv (1882).
Mytilaspis " Comst., 2nd Rep. Dep. Ent. Corn. Univ., p. 124 (1883).
 " *pomorum* " " " " " " p. 118 (1883).
 " " Saund., Ins. Inj. to Fruits, p. 40 (1883).
 " " Uhler, St. Nat. Hist., ii, p. 214 (1884).
 " *conchiformis* Goethe, Jahrb. Nass. Ver. Nat., pp. 118, 129 (1884).

- Mytilaspis pomorum* Tucker, Coun. Gent., 1, p. 607 (1885).
 “ “ Hubbard, Ins. Aff. Orange, p. 15 (1885).
 “ “ Dougl., Ent. Mon. Mag., xxiii, p. 27 (1886).
 “ “ Koons, Rep. Conn. Bd. Ag., p. 70 (1886).
 “ “ Cook, Am. Gard., vii, p. 265 (1886).
 “ linearis Dougl., Ent. Mon. Mag., xxiii, p. 27 (1886).
 “ pomorum Karsch, Ent. Nach., xiii, p. 349 (1887).
 “ “ Fletcher, Rep. Can. Exp. Farms, p. 25 (1887).
 “ “ Mask., Ins. Nox. Agr. N. Z., p. 51 (1887).
 “ “ Harvey, Rep. Me. Exp. Sta., p. 157 (1888).
 “ “ Weed, Bull. 3, (2), Ohio Exp. Sta., p. 28 (1888).
 “ pomicorticis McMillan, Bull. 2, Neb. Exp. Sta., p. 80 (1888).
 “ “ Riley & How., Ins. Life, iii, p. 89 (1890).
 “ conchiformis “ “ “ “ “ p. 89 (1890).
 “ linearis “ “ “ “ “ p. 89 (1890).
 “ “ Morg., Ent. Mon. Mag., xxvi, p. 226 (1890).
Aspidiotus (Mytilaspis) juglandis Pack., 5th Rep. U. S. Ent. Com., p. 338 (1890).
Mytilaspis pomorum “ “ “ “ “ p. 380 (1890).
 “ “ Craw, Rep. Cal. Bd. Hort., p. 7 (1891).
 “ “ French, Handb. Destr. Ins. Victoria, p. 77 (1891).
 “ “ Garman, Bull. 80, Ky. Exp. Sta., p. 217 (1892).
 “ “ Howard, Can. Ent., xxvi, p. 353 (1894).
 “ “ “ Ins. Life, vii, p. 256 (1894).
 “ “ Smith, Rep. N. J. Exp. Sta., p. 494 (1894).
 “ “ Howard, Yearbook U. S. Dep. Ag., p. 254 (1894).
 “ “ Hopkins, Rep. W. Va. Exp. Sta., p. 533 (1894).
 “ “ Lint., Bull. 13, N. Y. St. Mus., p. 269 (1895).
 “ “ Weed, Bull. 31, N. H. Exp. Sta., p. 15 (1895).
 “ “ Washb., Bull. 38, Ore. Exp. Sta., p. 9 (1895).
 “ “ Hillman, Bull. 36, Nev. Exp. Sta., p. 34 (1897).
A. (Diaspidiotus) juglandis Ckll., Bull. 6, T. s., Dep. Ag., pp. 16, 18 (1897).
Mytilaspis pomorum Osborn, Contr. Ia. Ag. Coll., p. 4 (1898).
 “ “ Targ., Annali di Agr., p. 133 (1898).
 “ “ Britton, 22nd Rep. Conn. Exp. Sta., p. 273 (1898).
 “ “ Chambliss, Bull. 4, Tenn. Exp. Sta., p. 146 (1898).
 “ “ Fletcher, Evid. Com. Ag. Ont., p. 18 (1898).
 “ “ Rolfs & Quaint., Cocc. Amer., Dec. i-ii, No. 11 (1898).
 “ “ Bruner, Rep. Neb. St. Hor. Soc., p. 5 (1899).
 “ “ Smith, Bull. 140, N. J. Exp. Sta., p. 5 (1899).
 “ “ Cooley, 6th Rep. Mont. Exp. Sta., p. 85 (1899).
 “ “ Newell, Bull. 43, Ia. Exp. Sta., p. 159 (1899).
 “ “ Marlatt, Bull. 20, n. s., Dep. Ag., p. 66 (1899).
 “ “ Hunter, Kan. Univ. Quar., viii, p. 14 (1899).
 “ “ Lockhead, Rep. Ent. Soc. Ont., p. 67 (1899).
 “ “ Harrington, “ “ “ “ “ p. 95 (1899).

Mytilaspis pomorum Harvey & Munson, Bull. 56, Me. Exp. Sta., p.110(1899).

“ “ “ “ Rep. Me. Exp. Sta., p. 110 (1899).

Ckll., Pr. Ac. N. Sci. Ph., p. 275 (1899).

“ ulmi “ “ “ “ “ “ p. 275 (1899).

“pomorum Lockhead, Rep. Ont. Dep. Ag., p. 40 (1900).

“ Newst., Journ. Roy. Hor. Soc., xxiii, p. 18 (1900).

“ Fern. H. T., Mass. Crop. Rep., May, p. 31 (1900).

“ Beach, Lowe, Stewart, 18th Rep. N. Y. Exp. Sta., p. 416 (1900).

“conchiformis Frank & Kruger, Schildlausbuch, p. 99 (1900).

"ulmi King & Ckll., Can. Ent., xxxiii, p. 200 (1901).

Lepidosaphes pomorum Kirkaldy, Fauna Haw., iii, pt. 2. p. 111 (1902).

Habitat.—Canada; United States; Brazil; Europe; Algeria; Australia; New Zealand; Japan; Hawaiian Islands.

Onelm; apple; pear; plum; currant; willow; birch; butternut; Cornus; ash; oak; linden; poplar; rose; wild cherry; *Stillingia sebifera*; *Ailanthus glandulosus*; *Ceanothus americanus*; *Sassafras officinale*; *Æsculus glabra*; *Syringa persica*; *Cysticus*, etc.

Lepidosaphes ulmi vitis (Goethe).

Mytilaspis pomorum var. *vitis* Goethe, Jahrb. Nass. Ver. Nat., p. 118 (1884).

“ “ “ “ Dougl., Ent. Mon. Mag., xxiii, p. 28 (1886).

Habitat.—England; Germany.

On grape-vine.

Lepidosaphes ulmi ulicis (Dougl.).

Mytilaspis ulicis Dougl., Ent. Mon. Mag., xxii, p. 249 (1886).

“ “ “ “ “ “ xxiii, p. 152 (1886).

“ pomorum var. ulicis Newst., Mon. Brit. Cocc., i, p. 200 (1901).

Habitat.—England.

On furze (*Ulex europæus*).

Lepidosaphes ulmi candida (Newst.).

Mytilaspis pomorum var. *candidus* Newst., Ent.Mon.Mag.,xxxvii,p.82(1901).

“ “ “ “ Mon. Brit. Cocc., i, p. 201(1901).

Habitat.—England.

On hawthorn.

Lepidosaphes ulmi japonica (Kuw.).

Mytilaspis pomorum var. *japonica* Kuw., Pr. Cal. Ac. Sci., (3),iii,p.80 (1902).

Habitat.—Japan.

On *Abies firma*.

Genus **ISCHNASPIS** Dougl. Type, filiformis=longirostris.

Ischnaspis Dougl., Ent. Mon. Mag., xxiv, p. 21 (1887); Newst., Mon. Brit. Cocc., i, p. 209 (1901).

1432. Ischnaspis longirostris (Sign.).

Mytilaspis longirostris Sign., Bull. Soc. Ent. Fr., (6), ii. p. xxxv (1882).

Ischnaspis filiformis Dougl., Ent. Mon. Mag., xxiv, p. 21 (1887).

“ “ Ckll., “ “ “ xxix, p. 17 (1893).

“ “ Mask., N. Z. Trans., xxvii, p. 52 (1894).

“ “ Craw, 5th Bien. Rep. Cal. Bd. Hort., p. 40 (1896).

“ longirostris Ckll., Check List, p. 336 (1896).

“ filiformis Newst., Ent. Mon. Mag., xxxiv., p. 94 (1898).

“ “ “ Jn. Roy. Hor. Soc., xxiii, p. 19 (1900).

“ longirostris Hemp., Rev. Mus. Paul., iv, p. 509 (1900).

“ filiformis Lefroy, Scale Ins. Less. Antil., p. 61 (1901).

“ “ Newst., Mon. Brit. Cocc., i, p. 210 (1901).

Habitat.—Great Britain (in conservatories); Brazil: New Zealand: Australia; Japan; Demerara; West Indies; Panama; Washington, D. C. (in hothouses).

On palms; palmetto; Pandanus; Latania; Magnolia grandiflora; Jasminum; Monstera; coffee, etc.

Genus **PARLATORIA** Targ. Type, lucasii=ziziphi.

Parlatoria Targ., Catalogue, p. 42 (1869): Sign., Ann. Soc. Ent. Fr., (4), ix, p.

450 (1869): Comst., Rep. U. S. Dep. Ag., 1880, p. 326 (1881); 2nd Rep.

Dep. Ent. Corn. Univ., p. 112 (1883): Berl., Riv. Pat. Veg., iv, p. 79

(1895): Green, Coccidæ Ceylon, pt. ii, p. 162 (1899): Newst., Mon. Brit.

Cocc., i, p. 139 (1901).

s. g. *Websteriella* Leon., Riv. Pat. Veg., viii, p. 208 (1900).

s. g. *Apteronidia* “ “ “ “ “ “ p. 321 (1900).

1433. Parlatoria affinis Newst.

Parlatoria affinis Newst., Tr. Ent. Soc. Lond., p. 97 (1897).

Habitat.—Algeria.

On *Fraxinus oxyphylla*; *Olea Europæa*.

1434. Parlatoria aonidiformis Green.

Parlatoria aonidiformis Green, Coccidæ Ceylon, pt. ii, p. 168 (1899).

Habitat.—Ceylon.

On *Nothoepia Colebrookiana*.

1435. Parlatoria blanchardii (Targ.).

Coccus Blanchardii Targ., Catalogue, p. 32 (1869).

“ “ “ “ “ “ Mem. Soc. Zool. Fr., v, pp. 69, 82 (1892).

Aonidia “ “ “ “ “ “ Bull. Soc. Ent. Ital., xxiii, p. 170 (1892).

Parlatoria victrix Ckll., The Entom., xxix, p. 52 (1896).

“ “ “ “ “ “ Craw, 5th Bien. Rep. Cal. Bd. Hort., p. 42 (1896).

“ blanchardi subsp. victrix Ckll., Bull. 32, Ariz. Exp. Sta., p. 283 (1899).

“ “ “ “ “ “ Ckll., Science, n. s., ix, p. 417 (1899).

“ “ “ “ “ “ Quaint. & Scott, Cocc. Amer., Dec. iii-iv, No. 15 (1901).

Habitat.—Australia; Algeria; Sahara; Arizona, from Egypt.

On date-palm.

1436. *Parlatoria calianthina* Berl. e Leon.

- Parlatoria calianthina* Berl. e Leon., Riv. Pat. Veg., iii, p. 346 (1895).
 " " " " Annali di Agr., p. 95 (1898).
 " " " " Cherm. Ital., Fasc. iii, No. 59 (1898).
 " " " " Riv. Pat. Veg., vii, pp. 259, 260 (1899).

Habitat.—Italy.

On rose; peach; apple; almond; olive.

1437. *Parlatoria cingala* Green.

Parlatoria cingala Green, Coccidæ Ceylon, pt. ii, p. 166 (1899).

Habitat.—Ceylon.

On Flacourtia; Scolopia.

1438. *Parlatoria crotonis* Dougl.

Parlatoria proteus var. *crotonis* Dougl., Ent. Mon. Mag., xxiii, p. 242 (1887).

- " *pergandei* " Ckll., Ins. Life, iv, p. 334 (1892).
 " " " " Ann. Mag. N. H., (6), xvi, p. 62 (1895).
 " " " " Bull. Bot. Dep. Jam., p. 107 (1897).
 " " " " Ann. Mag. N. H., (7), iii, p. 62 (1899).
 " *proteus* " " Pr. Ac. N. Sci. Ph., p. 275 (1899).
 " *pergandii* " " Newst., Journ. Roy. Hor. Soc., xxiii, p. 15 (1900).
 " *proteus* " " Mon. Brit. Cocc., i, p. 146 (1901).
 " *crotonis* Ckll., The Entom., xxxv, p. 59 (1902).

Habitat.—Antigua; Jamaica; Panama; Great Britain; Mass. (Harvard Botanic Gardens).

On Croton.

1439. *Parlatoria dryandræ* Full.

Parlatoria dryandræ Full., Notes on Cocc. W. Austr., p. 4 (1897).

" " " Tr. Ent. Soc. Lond., p. 467 (1899).

Habitat.—W. Australia.

On *Dryandra floribunda*.

1440. *Parlatoria myrtus* Mask.

Parlatoria myrtus Mask., N. Z. Trans., xxiii, p. 12 (1890).

" " " " " xxviii, p. 386 (1896).

Habitat.—S. Australia.

On *Myrtus communis*; "*Laurustinus*."

1441. *Parlatoria mytilaspiformis* Green.

Parlatoria mytilaspiformis Green, Cocc. Ceylon, pt. ii, p. 164 (1899).

Habitat.—Ceylon.

On *Psychotria thwaitesii*.

1442. *Parlatoria pergandii* Comst.

(*The Chaff scale*.)

Parlatoria pergandii Comst., Rep. U. S. Dep. Ag., 1880, p. 327 (1881).

" " " 2nd Rep. Dep. Ent. Corn. Univ., p. 113 (1883).

- Parlatoria pergandii* Saund., Ins. Inj. to Fruits, p. 401 (1883).
 “ “ Hubbard, Ins. Aff. Orange, p. 37 (1885).
 “ “ Morg., Bull. 28, La. Exp. Sta., p. 992 (1893).
 “ “ “ Spec. Bull. La. Exp. Sta., p. 62 (1893).
 “ “ Berl. e Leon., Cherm. Ital., Fasc. i, No. 2 (1895).
 “ “ Craw, 5th Bien. Rep. Cal. Bd. Hort., p. 41 (1896).
 “ “ Ckll., Bull. 6, T. s., Dep. Ag., p. 10 (1897).
 “ *pergandei* Rolfs & Quaint., Cocc. Amer., Dec. i-ii, No. 8 (1898).
 “ *pergandi* Berl. e Leon., Riv. Pat. Veg., vii, p. 268 (1899).
 “ *proteus* var. *pergandei* Ckll., Check List, Suppl., p. 397 (1899).
 “ *pergandii* Hemp., Rev. Mus. Paul., iv, p. 510 (1900).
 “ “ Marlatt, Yearbook U. S. Dep. Ag., p. 270 (1900).
 “ “ Hunter, Kan. Univ. Quar., ix, p. 105 (1900).
 “ “ Frank & Kruger, Schildlausbuch, p. 104 (1900).
 “ “ Newst., Mon. Brit. Cocc., i, p. 143 (1901).
 “ “ Kuw., Pr. Cal. Ac. Sci., (3), iii, p. 78 (1902).
 Habitat.—D. C.; Fla.; La.; Ohio; Kan.; Cal.; Mex.; Japan; Hawaiian Islands; Algeria; Europe.
 On orange; lemon; Japonica.

***Parlatoria pergandii camelliae* Comst.**

- Parlatoria pergandii* var. *Camelliae* Comst., 2nd Rep. Dep. Ent. Corn. Univ., p. 114 (1883).
 Habitat.—Washington, D. C. (in conservatory).
 On Camellia.

1443. *Parlatoria petrophilae* Full.

- Parlatoria petrophilae* Full., Tr. Ent. Soc. Lond., p. 468 (1899).
 Habitat.—W. Australia.
 On *Petrophila linearis*; *Hakea ilicifolia*.

1444. *Parlatoria pittospori* Mask.

- Parlatoria pittospori* Mask., N. Z. Trans., xxiii, p. 11 (1890).
 Habitat.—Australia.
 On *Pittosporum undulatum*.

1445. *Parlatoria proteus* (Curt.).

- Aspidiotus proteus* Curt., Gard. Chron., p. 676 (1843).
Diaspis parlatoris Targ., Studii sul. Cocc., p. 14 (1867).
 ?*Parlatoria orbicularis* Targ., Catalogue, p. 42 (1869).
 “ *proteus* Sign., Ann. Soc. Ent. Fr., (4), ix, p. 450 (1869).
 “ “ Comst., 2nd Rep. Dep. Ent. Corn. Univ., p. 114 (1883).
 “ “ Dougl., Ent. Mon. Mag., xxiii, p. 241 (1887).
 “ “ Craw, Rep. Cal. Bd. Hort., p. 15 (1891).
 “ “ Mask., N. Z. Trans., xxv, p. 213 (1892).
 ?*Aspidiotus targionii* Del Guer., Il Naturalista Siciliano, No. 8 (1894).
 ? “ “ Berl., Riv. Pat. Veg., iv, p. 185 (1895).

Parlatoria proteus Berl. e Leon., Cherm. Ital., Fasc. i, No. 2 (1895).

? " *targionii* Ckll., Check List, p. 335 (1896).

" *proteus* Mask., N. Z. Trans., xxix, p. 300 (1897).

" " Ckll., Bull. Bot. Dep. Jam., iv, p. 108 (1897).

" " Hunter, Kan. Univ. Quar., ix, pp. 105, 106 (1900).

" " Zimm., Bull. Inst. Bot. Buitenzorg, No. 10, p. 19 (1901).

" " Newst., Mon. Brit. Cocc., i, p. 140 (1901).

Habitat.—Europe; Australia; Japan; China; Formosa; Hawaiian Islands; Brazil; N. Y.; D. C.; Kan.

On *Selenipedium*; *Macrozamia*; *Pinus insignis*; *Myrtus*; *Citrus*; *Camellia*; *Machilus*; apple; date-palm.

***Parlatoria proteus virescens* Mask.**

Parlatoria proteus var. *virescens* Mask., N. Z. Trans., xxix, p. 300 (1897).

Habitat.—China; Japan; Formosa.

On *Myrtus*; *Camellia*; *Pyrus sinensis*; rose.

***Parlatoria proteus palmæ* Mask.**

Parlatoria proteus var. *palmæ* Mask., N. Z. Trans., xxx, p. 229 (1898).

" " " " Ckll., Science, n. s., ix, p. 417 (1899).

Habitat.—Australia.

On date-palms imported from Algeria?

1446. *Parlatoria sinensis* Mask.

Parlatoria sinensis Mask., Ent. Mon. Mag., xxxiii, p. 241 (1897).

" " " " N. Z. Trans., xxx, p. 228 (1898).

Habitat.—China.

On orange.

1447. *Parlatoria theæ* Ckll.

Parlatoria theæ Ckll., Psyche, vii, Suppl., i, p. 21 (1896).

" " " " Bull. 4, T. s., Dep. Ag., p. 55 (1896).

Habitat.—Japan; New York (imported on Japanese maple).

On tea-plant; Japanese maple.

***Parlatoria theæ euonymi* Ckll.**

Parlatoria theæ var. *euonymi* Ckll., Am. Nat., xxxi, p. 591 (1897).

Habitat.—Japan.

On *Euonymus*.

***Parlatoria theæ viridis* Ckll.**

Parlatoria theæ var. *viridis* Ckll., Bull. 4, T. s., Dep. Ag., p. 43 (1896).

" " " " " Psyche, vii, Suppl., i, p. 21 (1896).

" " " " " Craw, 5th Bien. Rep. Cal. Bd. Hort., p. 42 (1896).

" " " " " Ckll., Jn. N. Y. Ent. Soc., vii, p. 258 (1899).

Habitat.—Japan.

On *Ilex pedunculosa*.

1448. *Parlatoria viridis* Full.

Parlatoria viridis Full., Notes on Cocc. W. Austr., p. 4 (1897).

" " " Tr. Ent. Soc. Lond., p. 467 (1899).

Habitat.—W. Australia.

On *Pittosporum*.

1449. *Parlatoria ziziphus* (Lucas).

Coccus ziziphus Lucas, Bull. Soc. Ent. Fr., (3), i, p. xxviii (1853).

Chermes aurantii Bdv., Ent. Hort., p. 338 (1867).

Parlatoria lucasii Targ., Catalogue, p. 42 (1869).

" *zizyphi* Sign., Ann. Soc. Ent. Fr., (4), ix, p. 451 (1869).

" " Comst., 2nd Rep. Dep. Ent. Corn. Univ., p. 115 (1883).

" *lucasii* Targ., Annali di Agr., p. 398 (1884).

" " Cocc. deg. Agr. Ital., p. 18 (1891).

" *zizyphi* Dougl., Ent. Mon. Mag., xxviii, p. 162 (1892).

" " Berl. e. Leon., Cherm. Ital., Fasc. i, No. 1 (1895).

" " Riv. Pat. Veg., iv, pp. 84, 137 (1895).

" " " " " " pp. 195, 224 (1896).

" " Mask., N. Z. Trans., xxviii, p. 386 (1896).

" " " " " " xxix, p. 301 (1897).

" " Full., Notes on Cocc. W. Austr., pp. 4, 13 (1897).

" " Newst., Tr. Ent. Soc. Lond., p. 98 (1897).

" " Frank & Kruger, Schildlausbuch, p. 104 (1900).

" " Newst., Mon. Brit. Cocc., i, p. 148 (1901).

Habitat.—Europe; Algeria; Hawaiian Islands; Formosa; China; W. Australia; United States, on imported fruit.

On *Zizyphus pinnachristi*; date-palm; orange; lemon.

Generic Location Uncertain.

1450. *Orthezia edwardsii* Ashm., Can. Ent., x, p. 203 (1878).
" " Lounsb., 32nd Rep. Mass. Ag. Coll., p. 125 (1895).
" " Ckll., Check List, p. 326 (1896).

Habitat.—California.

" Probably the male of a *Pseudococcus* " (Ckll.).

Rhizobius

1451. *Rhizococcus jujubæ* Buckton, Mon. Brit. Aphides, iv, p. 181 (1883).
" " " Ind. Mus. Notes, iv, p. 277 (1899).
" " Ckll., The Entom., xxxiv, p. 127 (1901).

Habitat.—India.

On roots of *Zizyphus jujuba*.

1452. *Villigera frauenfeldi* Karsch, Wien. Ent. Zeit., i, p. 63 (1882).

Habitat.—China.

" Probably a *Monophlebus* " (Ckll.).

Species without Description or not Recognizable.

- 1453. *Aspidiotus cymbidii*** Bouché, Stett. Ent. Zeit., iv, p. 296 (1884).
 " " Ckll., Biol. Centr. Amer., ii, pt. 2, p. 30 (1899).
 Habitat.—China. On Cymbidium.
- 1454. *Aspidiotus rhododendri*** "Wailes," Sign., Ann. Soc. Ent. Fr., (4),
 x, p. 109 (1870).
- 1455. *Calypticus aterrimus*** Costa, Faun. Reg. Nap., Cocc., p. 11 (1835).
 Lecanium " Sign., Ann. Soc. Ent. Fr., (4), viii, p. 844 (1868).
 Habitat.—Italy. On *Quercus ilex*.
- 1456. *Ceroplastes crispata*** Targ., Catalogue, p. 35 (1869).
 " " Sign., Ann. Soc. Ent. Fr., (5), ii, p. 46 (1872).
 Habitat.—Europe?
- 1457. *Chermes angræci*** Bdv., Ent. Hort., p. 337 (1867).
 Lecanium " Sign., Ann. Soc. Ent. Fr., (5), vi, p. 609 (1876).
 " " Ckll., Gard. Chron., (3), xiii, p. 548 (1893).
 Habitat.—Madagascar. On *Angræcum sesquipedale*.
- 1458. *Chermes clematidis oblongus*** Geoff., Abr. Ins., p. 506 (1762).
 " " Fourc., Ent. Paris., p. 228 (1785).
 Coccus clematidis Gmel., Syst. Nat., Ed. xiii, p. 2220 (1789).
 " " Ckll., The Entom., xxxiv, p. 92 (1901).
 Habitat.—Europe. On Clematis.
- 1459. *Chermes dionis*** Bdv., Ent. Hort., p. 327 (1867).
 Habitat.—France. On *Dion edule*.
- 1460. *Chermes fulchironia*** Bdv., Ent. Hort., p. 330 (1867).
 Habitat.—France. On *Fulchironia senegalensis*.
- 1461. *Chermes punctiformis*** Bdv., Ent. Hort., p. 330 (1867).
 Habitat.—France. On orchids.
- 1462. *Coccus aceris*** Fab., Ent. Syst., iv, p. 225 (1794).
 Habitat.—Europe. On maple.

1463. *Coccus adonidum* Linn., Syst. Nat., Ed. xii, i, p. 740 (1766).

“ “ Fab., Syst. Ent., p. 743 (1775).

“ “ “ Spec. Ins., ii, p. 393 (1781).

“ “ “ Mant. Ins., ii, p. 318 (1787).

“ “ Gmel., Syst. Nat., Ed. xiii, p. 2215 (1789).

“ “ Fab., Ent. Syst., iv, p. 224 (1794).

“ “ “ Syst. Rhyng., p. 307 (1803).

“ “ Ckll., Pr. Ac. N. Sci. Ph., p. 261 (1899).

Habitat.—America? Southern Europe; Africa: Asia.

The description of *Coccus adonidum* by Linnæus is not that of a “mealy bug”, but probably of some species of *Orthezia*, as stated by Prof. Cockerell.

1464. *Coccus alchimillæ* “Berg.,” Walk., Cat. Brit. Mus., Hom., p. 1082 (1852).

Habitat.—Europe?

1465. *Coccus asari* Schr., Faun. Boica, ii, pt. 1, p. 146 (1801).

“ “ Sign., Ann. Soc. Ent. Fr., (5), vi, p. 609 (1876).

Habitat.—Europe. On *Asarum europæum*.

1466. *Coccus bassi* Targ., Studii sul Cocc., pp. 25, 27, 30 (1867).

“ “ “ Catalogue, p. 32 (1869).

Habitat.—Mexico.

1467. *Coccus cambii* Ratz., Forstins., iii, p. 194 (1844).

Lecanium “ Targ., Catalogue, p. 41 (1869).

“ “ Sign., Ann. Soc. Ent. Fr., (5), vi, p. 160 (1876).

Habitat.—Germany. On oak.

This may be a *Kermes*.

1468. *Coccus capensis* Linn., Syst. Nat., Ed. xii, p. 740 (1766).

“ “ Sign., Ann. Soc. Ent. Fr., (5), vi, p. 611 (1876).

Habitat.—South Africa. On *Gnaphalium*.

1469. *Coccus caudatus* Walk., Cat. Br. Mus., Hom., p. 1085 (1852).

“ “ Sign., Ann. Soc. Ent. Fr., (5), vi, p. 612 (1876).

Habitat.—Colombia. A *Phenacoccus*?

1470. *Coccus chlaeoon* Anderson, Lett. to Banks, No. 1 (1787).

“ “ Sign., Ann. Soc. Ent. Fr., (5), vi, p. 612 (1876).

Habitat.—India.

1471. *Coccus diacopeis* Anderson, Lett. to Banks, No. 7 (1789).

“ “ Sign., Ann. Soc. Ent. Fr., (5), vi, p. 613 (1876).

Habitat.—China. On *Citrus sinensis*.

1472. *Coccus diosmatis* Mod., Act. Goth., i, p. 21 (1778).

Lecanium “ Sign., Ann. Soc. Ent. Fr., (5), vi, p. 614 (1876).

Habitat.—Cape of Good Hope.

1473. **Coccus draparnaldi** Bory de St. Vincent, Journ. Hist. Nat. Bordeaux, iii, p. 77 (1798).
1474. **Coccus elioides** Costa, Faun. Reg. Nap., Cocc., pl. 6, fig. 3 (1835).
 " " Sign., Ann. Soc. Ent. Fr., (5), vi, p. 614 (1876).
 Habitat.—Italy.
1475. **Coccus erion** Anderson, Lett. to Banks, No. 4 (1789).
 " " Sign., Ann. Soc. Ent. Fr., (5), vi, p. 615 (1876).
 Habitat.—India. On Rosa sinensis; Ficus indica; Robinia; Cocos, etc.
1476. **Coccus folii-quercus** Sulzer, Gesch. Ins., p. 112 (1776).
1477. **Coccus fraxini** Chav., Ann. Soc. Ent. Fr., (2), vi, p. 142 (1848).
 " " Sign., " " " " (5), vi, p. 616 (1876).
 Habitat.—Italy. On Fraxinus rotundifolia; F. ornus.
1478. **Coccus hordeolum** Dalm., K. Vet. Akad. Handl., xlv, p. 365 (1825).
 Aspidiotus " Walk., Cat. Br. Mus., Hom., p. 1068 (1852).
 Lecanium " Targ., Catalogue, p. 38 (1869).
 Habitat.—Sweden.
1479. **Coccus hyperici** Pallas, Reise Russ. Reich., i, p. 21 (1771).
 " hypericonis Gmel., Syst. Nat., Ed. xiii, p. 2219 (1789).
 " " Sign., Ann. Soc. Ent. Fr., (5), vi, p. 617 (1876).
 Habitat.—Russia. On Hypericum perforatus.
1480. **Coccus hystrix** Baer., Zeit. für Zool., p. 173 (1849).
 " " Sign., Ann. Soc. Ent. Fr., (5), vi, p. 617 (1876).
 Habitat.—France. On fir.
1481. **Coccus koleos** Anderson, Lett. to Banks, No. 6 (1789).
 " " Sign., Ann. Soc. Ent. Fr., (5), vi, p. 618 (1876).
 Habitat.—India. On Solanum.
1482. **Coccus microgenes** Anderson, Lett. to Banks, No. 5 (1789).
 " " Sign., Ann. Soc. Ent. Fr., (5), vi, p. 620 (1876).
 Habitat.—India. On Vitis vinifera.
1483. **Coccus narcodes** Anderson, Lett. to Banks (1789).
 " " Sign., Ann. Soc. Ent. Fr., (5), vi, p. 621 (1876).
 Habitat.—India. On "Wodier."
1484. **Coccus oogenes** Anderson, Lett. to Banks, No. 3 (1787).
 " " Sign., Ann. Soc. Ent. Fr., (5), vi, p. 621 (1876).
 Habitat.—India. On Hibiscus.
1485. **Coccus ovatus** Turton, Syst. Nat., ii, pt. 1, p. 716 (1801).
1486. **Coccus phalaridis** Linn., Syst. Nat., Ed. x, p. 456 (1758).
 " " Fab., Syst. Ent., p. 744 (1775).
 " " Licht., Ent. Mon. Mag., xiv, p. 34 (1877).
 Habitat.—Europe. On Phalaris canariensis.

1487. *Coccus pilosellæ* Fab., Syst. Ent., p. 744 (1775).
 “ “ Oliv., Ency. Meth., vi, p. 98 (1791).
 “ “ Sign., Ann. Soc. Ent. Fr., (5), vi, p. 622 (1876).
 Habitat.—Europe. On roots of *Hieracium pilosellæ*.
1488. *Coccus potentillæ* Mayer, Abh. Privatges. Böhmen, iv, p. 184 (1779).
 Habitat.—Europe. On *Potentilla*.
1489. *Coccus poterii* Walk., Cat. Br. Mus., Hom., p. 1082 (1852).
 Habitat.—England.
1490. *Coccus purpuratus* Dalm., K. Vet. Akad. Handl., xlv, p. 363 (1825).
 “ “ Sign., Ann. Soc. Ent. Fr., (5), vi, p. 623 (1876).
 Habitat.—Sweden. A *Pseudococcus*?
1491. *Coccus salicis* Fitch, 4th Rep. Regents Univ. N. Y., p. 69 (1851).
 Lecanium “ Walk., Cat. Br. Mus., Hom., iv, p. 1072 (1852).
 “ americanum Targ., Catalogue, p. 38 (1869).
Coccus salicis Lint. (reprint from Fitch), 9th Rep. Ins. N. Y., p. 409 (1893).
 Lecanium “ Riley, 9th Rep. Ins. N. Y., pp. 411, 413 (1893).
 Habitat.—New York. On willow.
1492. *Coccus sinensis* Walk., Cat. Br. Mus., Hom., p. 1085 (1852).
 “ “ Sign., Ann. Soc. Ent. Fr., (5), vi, p. 624 (1876).
 Habitat.—China. On sugar-cane.
1493. *Coccus trichodes* Anderson, Lett. to Banks (1789).
 “ “ Sign., Ann. Soc. Ent. Fr., (5), vi, p. 625 (1876).
 Habitat.—India. On *Psidium*; *Hibiscus*; *Solanum*, etc.
1494. *Coccus uva* Mod., Act. Goth., i, p. 32 (1778).
 “ “ Gmel., Syst. Nat., Ed. xiii, p. 2222 (1789).
 Habitat.—Sweden. An *Orthezia*?
1495. *Coccus uvæ-ursi* Linn., Faun. Suec., p. 266 (1761).
 “ “ “ “ Syst. Nat., Ed. xii, p. 742 (1766).
 “ arbuti “ “ “ “ “ p. 742 (1766).
 “ “ Oliv., Ency. Meth., vi, p. 98 (1791).
 Habitat.—Europe. On roots of *Arbutus uva-ursi*.
1496. *Coccus xylostei* Schr., Faun. Boica, ii, pt. 1, p. 145 (1801).
 “ “ Sign., Ann. Soc. Ent. Fr., (5), vi, p. 629 (1876).
 On *Lonicera xylosteum*.
1497. *Diaspis asparagi* Giard, Bull. Soc. Ent. Fr., (7), iii, p. cxcix (1893).
 Habitat.—Algeria. On *Asparagus horridus*.
1498. *Diaspis aurantii* Sign., Bull. Soc. Ent. Fr., (6), iii, p. lxiii (1883).
 Habitat.—British Guiana. On orange.

- 1499. Diaspis vandalicus** Galvez, no desc.
 " " Reimer, Ins. Life, ii, p. 278 (1890).
 " " Ckll., " " iii, p. 296 (1891).
 " " " Ent. Mon. Mag., xxix, p. 38 (1893).
 Habitat.—Cuba. On cocoanut leaves.
- 1500. Kermes camelliæ** Bdv., Ent. Hort., p. 334 (1867).
 Habitat.—France. On Camellia; tea.
- 1501. Lecanium asparagi** Giard, Bull. Soc. Ent. Fr., (7), iii, p. cxcix (1893).
 Habitat.—Algeria. On Asparagus horridus.
- 1502. Lecanium australe** Walk., Cat. Br. Mus., Hom., p. 1079 (1852).
 " orbiculare Targ., Catalogue, p. 39 (1869).
 " australe Sign., Ann. Soc. Ent. Fr., (5), vi, p. 610 (1876).
 Habitat.—Tasmania.
- 1503. Lecanium capense** Walk., Cat. Br. Mus., Hom., p. 1079 (1852).
 " " Sign., Ann. Soc. Ent. Fr., (5), vi, p. 612 (1876).
 Habitat.—Algoa Bay.
- 1504. Lecanium erythrinæ** Iher., Rev. Mus. Paul., ii, p. 407 (1897).
 " " Hemp., " " " iv, p. 438 (1900).
 Habitat.—Brazil.
- 1505. Lecanium gigas** Brems Wolf., Verh. Schw. Nat. Ges., p. 41 (1847).
 " " Sign., Ann. Soc. Ent. Fr., (5), vi, p. 616 (1876).
 Habitat.—France. On oak. A Kermes?
- 1506. Lecanium pictum** Targ., Catalogue, p. 38 (1869).
 Habitat.—Europe?
- 1507. Lecanium planchonii** Targ., Catalogue, p. 39 (1869).
 Habitat.—Europe? On oak.
- 1508. Lecanium platycerii** Pack., Rep. Mass. Bd. Ag., p. 260 (1869-70).
 " " Comst., 2nd Rep. Dep. Ent. Corn. Univ., p. 134 (1883).
 Habitat.—Mass. (in a greenhouse). On ferns.
- 1509. Lecanium tubuliferum** Ckll., The Entom., xxxi, p. 132 (1898).
 " " " Biol. Centr. Amer., ii, pt. 2, p. 11 (1899).
 Habitat.—Mexico. An immature Kermes?
- 1510. Lecanium vaccinii-macrocarpum** Goethe, Jahrb. Nass. Ver. Nat.,
 p. 125 (1884).
 " " " Karsch, Ent. Nach., xi, p. 380
 (1885).
 Habitat.—Germany.

1511. *Lecanium vagabundum* Först., Verh. d. Nat. Ver. pr. Rh., viii, p. 560 (1851).

“ “ Sign., Ann. Soc. Ent. Fr., (5), vi, p. 628 (1876).

“ “ Dougl., Ent. Mon. Mag., xxiii, p. 25 (1886).

Habitat.—Europe. This name included all the species of *Eulecanium* known to Förster.

1512. *Lecanium virgatum* Targ., Catalogue, p. 39 (1869).

“ “ Sign., Ann. Soc. Ent. Fr., (5), vi, p. 629 (1876).

Habitat.—Australia.

1513. *Lecanium vulgare* Kalt. (ex Först.). Die Pflanz., p. 213 (1874).

“ “ Sign., Ann. Soc. Ent. Fr., (5), vi, p. 629 (1876).

Habitat.—Europe. Several European species of *Eulecanium* were included under this name.

1514. *Leucaspis monophyllus* Murray, Bull. Soc. Ent. Fr., (6), ii, p. clxxxv (1882).

Habitat.—Europe. On pine. “Probably a *Monophlebus*” Ckll.

Insects Described as Coccids but which belong to other Families.

Ascelis multitudinea Tepp.	A Psyllid.
Aspidiotus bicarinatus Walk.	A Lepidopterous larva.
Aspidiotus gossypii Fitch.	An Aleyrodes.
Aspisarcus eucalypti Newp.	A Psyllid ?
Asterolecanium rhamni Kieffer.	A Psyllid.
Coccus ceratiformis Butler.	Not a Hemipteron.
Coccus cryptus Karvall.	A Hymenopteron.
Coccus laricis Bouché.	An Aphid.
Coccus(?) lataniæ Bdv.	An Aphid.
Coccus prænanthes Bdv.	An Aleyrodes.
Coccus strobi Baer.	An Aphid.
Coccus zosteræ Fab.	A Spirorbis ?
Lecanium complanatum Baer.	An Aleyrodes.

Corrections and Additions.

- No. 19. Omit the habitats and food plant, as they are unknown.
" 25. Add On Eucalyptus.
- Page 19. For **GUERINIA** read **GUERINIELLA**. **GUERINIA** is preoccupied having been used for a genus of the Diptera in 1830.
- No. 33. Omit Brazil from the habitat.
" 34. For France read Attica, Greece, and add On Pinus halepensis.
" 35. Add Palæococcus hempeli Ckll., The Entom., xxxv, p. 233 (1902).
" 36. For in litt. read The Entom., xxxv, p. 233 (1902).
" 37. Add Palæococcus nudatus Ckll., The Entom., xxxv, p. 233 (1902).
" 39. Omit Australia and Hakea gibbosa.
- Page 23. To the genus **WALKERIANA** add s.g. *Aspidoproctus* Newst., Pr. Zool. Soc. Lond., p. 948 (1900): Ckll., The Entom., xxxv, p. 257 (1902). Type, pertinax.
- No. 50. For **braziliensis** read **brasiliensis**.
" 54. Add the subspecies *Icerya littoralis tonilensis* Ckll., The Entom., xxxv, p. 318 (1902). Habitat.—Mexico.
" 56. Omit the food plants.
" 59. Omit the habitat Trinidad, and for the food plant Pittospermum read Pittosporum.
" 62. Omit the habitat New Zealand.
" 64. For Europe read South Africa.
" 65. For East Indies read West Indies.
" 66. For **gallica** read **gallicus**, and add *Margarodes gallicus* Ckll., The Entom., xxxv, p. 258 (1902). On *Polygonum aviculare*?
" 67. Add *Margarodes hameli* Ckll., The Entom., xxxv, p. 258 (1902).
" 69. Add *Margarodes perrisii* Ckll., The Entom., xxxv, p. 258 (1902).
" 71. Omit Europe from the habitat.
" 86. For **zeylanicus** read **zeylanica**.
" 90. Add On golden-rod; burdock; Impatiens; Eupatorium.
" 94. For *Cheilanthes* read *Cheilanthes*.
- Page 34. Add No. 95 $\frac{1}{2}$. **Orthezia galapagoensis** Kuw., Jn. N. Y. Ent. Soc., x, p. 28 (1902).
" 37. Eighth line, the reference *Orthezia characias* Riley, etc. belongs under No. 59.
- No. 110. For France read Switzerland.
- Page 38. To the genus *Conchaspis* add the original reference, Ckll., Bull. Bot. Dep. Jam., No. 40, Feb. [publ. March] (1893).

- No. 131. Add Habitat, Australia. On *Eucalyptus*.
- " 171. Add On bamboo; and under the subspecies *bambusulæ*, for India read West Indies.
- No. 176. Prof. Cockerell thinks the true *fimbriatum* was not found in Australia.
- " 177. For *grandis* read *grande*.
- " 186. *Lecanium quercicola* Bouché, is not known, and all the references under this name, except the first, belong to No. 192. See Pr. Ac. N. Sci. Ph., p. 269 (1899). Transfer also all the habitats except Europe.
- Page 54. Second line, for *Asterolecanium variolosum*, read *Coccus variolosus*; and in the fourth line, after *variolosum*, insert Boas, the author of the article. To the habitat add New Zealand, and to the food plants add, and other species of *Quercus*.
- No. 207. Add New Mexico and Colorado to the habitat.
- " 209. For *Ciste salviaefolia* read *Cistus salvifolius*.
- Page 57. For **AMORPHOCOCUS** read **AMORPHOCOCCUS**.
- No. 256. Omit U. S. from the habitat.
- " 276. For *cavellei* read *cavellii*.
- " 279. Add Japan to the habitat.
- " 289=538. Transferred to the genus **ERIUM** by Prof. Cockerell.
- " 293. For Alaska read Dawson City, Canada, and add New Mexico.
- " 303. Omit this number, the name being an error for No. 401.
- " 311. For *formicola* read *formicicola*.
- " 324. Prof. Cockerell thinks this was on a cultivated South American cactus in Germany.
- " 327. Omit var. *graminæ* from food plant.
- " 330. Omit India from habitat. Under the subspecies *simplex*, for xxix read xxx, and for 1897, read 1898. For *Pittosporum undulatum* read *Eucalyptus*.
- " 333. For New Mexico read Georgia.
- " 336. *Eriococcus tricarinatus* is not considered a synonym of *E. simplex dealbata*. The way it is printed in Tr. Ent. Soc. Lond., p. 442 (1899) is misleading. Prof. Cockerell has kindly called my attention to this fact.
- " 342. For Europe read Royal Gardens, Kew, England.
- " 346. For *Opuntia coccinelliferi* read *Opuntia coccinellifera*.
- " 347. Add Colorado to the habitat. Under the subspecies *newsteadi*, for Colorado read Northern Mexico.
- " 348. Omit New Mexico from the habitat.
- " 354. Prof. Cockerell informs me that the reference in Can. Ent. is earlier than that in Rev. Mus. Paul., and therefore the species should be known as **Capulinia crateraformis**.
- Page 85. For **SPHÆROCOCOPSIS** read **SPHÆROCOCCOPSIS**.
- No. 366. Add *Sphærococcus distichlium* Ckll., in litt. (1902).

- No. 407. Omit India from the habitat.
 " 427. For New Mexico read Trinidad.
 " 431. For Dactylopius read Ceroputo.
 " 432. Omit Antigua from the habitat. Under the subspecies *mexicanus*, omit yuccæ var. from the first reference.
 " 443. Omit Southern Alps.
 " 445. Omit palm.
 " 446. Omit Auckland.
 " 464. Add Mexico to the habitat.
 " 468. For Ckll. in the fourth reference, read Mask.
 " 491. For England read Guernsey.
 " 523. Omit New Mexico from the subspecies *kingii*.
 " 570. The first reference is incorrect. *C. halophilus* was not described by A. Hardy in Cochenille in Algeria, but by J. Hardy. I cannot now give the reference to his description. Omit Algeria and France from the habitat, and for Statice armeria, read Statice; Armeria.
 " 695. For *tuberculatus* read *tuberculata*.
 " 718. Add *Lichtensia parvula* Ckll., Ann. Mag. N. H., (7), x.p.467(1902).
 " 720. Omit Mass. from habitat, and *Spiræa salicifolia* and *Prinos verticillatus* from the food plants. The insect was incorrectly determined.
 " 727, 757, 764, 765, 771, 776. Omit Europe from the habitats.
 " 735. For Ckll. in third line, read Green. Prof. Cockerell states that this species is a synonym of No. 744, and that the so called *C. ceriferus* from Mexico is *C. dugesii*.
 " 755. For the second reference, read *Ceroplastes africanus* var. *cristatus*; and in the third reference, for Ckll. read Green.
 " 764. Omit British Guiana.
 Page 156. First line, Ckll. alone is the authority for var. B.
 No. 783. Omit British Guiana, Australia and Japan.
 " 786. Add the original reference, Boll. Soc. Ent. Ital., xxxii, p. 229-252 (1900). In the reference to Science, for Del Guer. read Ckll.
 " 832. For Hemp. read Ckll.
 Page 165. Omit lounsburyi from the generic reference for *Cryptinglisia*.
 No. 837. Omit Jamaica from the habitat, and *lignum-vitæ* from the food plants.
 " 917. Add *Coccus salicum* Fab., Spec. Ins., ii, p. 394 (1781).
 " 955. Add *Lecanium pruinum* Tyr., Rep. Cal. Exp. Sta., p. 267 (1896).
 Page 195. In the 14th and 15th lines, for *quercitroneis* read *pruinum*, and transfer the subspecies to No. 955.
 No. 964. Omit New Mexico from the habitat.
 Page 266. Omit the food plant "bark of Liquidambar" from *Aspidiotus juglans-regiæ pruni*.
 No. 1261. For *Cæsalpina* read *Cæsalpinia*.
 No. 1370. For (non Schir.), read (non Schr.).

It has been impossible in many cases to determine whether an imported species lives in the open air or only in greenhouses, when the fact was not stated by the author; and it is probable that the words, "in greenhouses," should have been added to more species included in this work.

The species with the habitat "California, at quarantine" may not have become established in that state, as the law required the plants on which the insects occurred to be fumigated or destroyed if they were to remain in California; but if they were directed to other states, they were forwarded to their destination.

The writer would be glad to have her attention called to any errors or important omissions that may be detected in this work, and also to receive papers or separata of articles on Coccidæ published later than March 1, 1903, in order that they may be catalogued in a Supplement should there be a demand for such a work.

Index.

Subfamily names are printed in Capitals. Generic and subgeneric names begin with a capital letter. Names of species and subspecies are entirely in lower case type. Synonyms are in italics.

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